

**MASTER  
NEGATIVE  
NO. 95-82428-2**

## **COPYRIGHT STATEMENT**

The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted materials including foreign works under certain conditions. In addition, the United States extends protection to foreign works by means of various international conventions, bilateral agreements, and proclamations.

Under certain conditions specified in the law, libraries and archives are authorized to furnish a photocopy or other reproduction. One of these specified conditions is that the photocopy or reproduction is not to be "used for any purpose other than private study, scholarship, or research." If a user makes a request for, or later uses, a photocopy or reproduction for purposes in excess of "fair use," that user may be liable for copyright infringement.

The Columbia University Libraries reserve the right to refuse to accept a copying order if, in its judgement, fulfillment of the order would involve violation of the copyright law.

Author:

Bureau of Municipal  
Research...

Title:

Making a municipal  
budget

Place:

[New York]

Date:

[1907]

95-82428-2  
MASTER NEGATIVE #

COLUMBIA UNIVERSITY LIBRARIES  
PRESERVATION DIVISION

BIBLIOGRAPHIC MICROFORM TARGET

ORIGINAL MATERIAL AS FILMED - EXISTING BIBLIOGRAPHIC RECORD

Business  
D684  
B894

Bureau of municipal research, *New York*.

Making a municipal budget, functional accounts and operative statistics for the Department of health of Greater New York; prepared and published by the Bureau of municipal research, New York, 1907 ... [New York, 1907]

171 p. Incl. forms. 22 $\frac{1}{2}$ cm.

1. New York (City) Health dept. 2. Municipal finance. 3. Vital statistics.  
I. Title.

Library of Congress



RA122.N8B8

7-41537

[38c2]

RESTRICTIONS ON USE:

TECHNICAL MICROFORM DATA

FILM SIZE: 35mm

REDUCTION RATIO: 12x

IMAGE PLACEMENT: IA IIA IB IIB

DATE FILMED: 3/22/95

INITIALS: W.W

TRACKING # : MSH 05507

FILMED BY PRESERVATION RESOURCES, BETHLEHEM, PA.



2.5 mm  
1234567890  
2.0 mm  
1.5 mm



# PM-MGP 13"x18" METRIC GENERAL PURPOSE TARGET PHOTOGRAPHIC



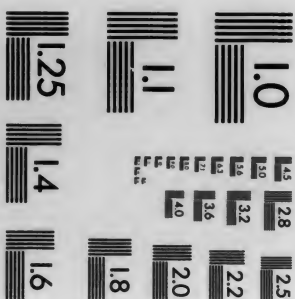
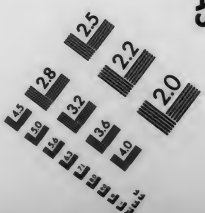
200 mm

150 mm

100 mm

A4

A5

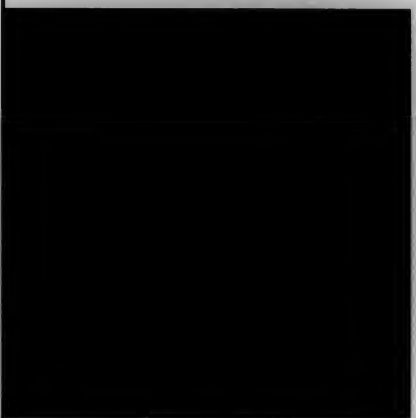


1.0 mm

1.5 mm

2.0 mm

2.5 mm



## PRECISION<sup>SM</sup> RESOLUTION TARGETS



1303 Geneva Avenue  
St. Paul, MN 55119

ABCDEF GHIJ KLMNOP QRSTUV WXYZ  
1234567890

4.5 mm

ABCDEF GHIJ KLMNOP QRSTUV WXYZ



D 684

B 894

Bureau  
of Municipal  
Research

1907

Making a  
Municipal  
Budget

DAMAGED PAGE(S)

1343  
MAKING A MUNICIPAL BUDGET

FUNCTIONAL ACCOUNTS AND OPERATIVE STATISTICS  
FOR THE  
DEPARTMENT OF HEALTH OF GREATER NEW YORK

PREPARED AND PUBLISHED  
BY THE  
BUREAU OF MUNICIPAL RESEARCH  
NEW YORK, 1907

A limited number of copies of this report may be obtained at  
50 CENTS EACH

## INDEX

Accounts, department of health, 1906	25-27
Defects in and revision of	10, 27-31
Segregation ledger	27, 30, 156-165
Cost vs. disbursement, expense vs. expenditure accounting	10, 11, 27, 28
Commissioners of, and service records	21
Aldermen demand classification of budget, 1906	11, 36
Budget: effective publicity through	3, 5
Defects in and revision of	6, 9, 30
Advantages of classification	7, 11, 12, 36, 37
Conference committee on revision of, 1908	11
Estimates should be explained	11, 15, 16
Bureau's brief for segregated budget, 1906	11, 34, 35, 39
Titles of appropriations, 1906, 1907, 1908	38-44
Service reports in connection with	15, 16
Bureau of Municipal Research: history, purposes	Cover, 5
Trustees and administrative council	3
Brief for segregated budget, 1906	11, 34, 35, 39
Conference committee with department of finance, 1907	11
Death rate vs. case rate as test of public health	22-24
Control through accounts and records	12, 21, 27-30, 32
Estimate and apportionment, board of	11, 34, 35, 37
Exhibits (omitted from abridged edition)	
1. Bureau's brief for segregated budget, 1906	34, 35
2. Resolutions, (a) board of aldermen, and (b) board of estimate and apportionment, 1906, favoring segregated budget	36, 37
3. Appropriation titles, health budget, (a) 1906, (b) suggested by Bureau for 1907, (c) actual, 1907, (d) 1908	38-45
4. 99 blank forms for health report	46-153
5. Suggested form for report of expenditures	154, 155
6. Segregation ledger, proposed classification	156-165
7. Scoring cards: dairies, creameries, milk shops	166-171
Function as basis of budget, accounts and records	9-14, 20, 28, 29, 30
Health, department of: functions of	7, 13, 14
Public interest starting point for budget revision	7, 9, 34, 35
Reports and records in 1906, and revision of	10-12, 15, 17-19, 21, 22, 25, 46-153
Ledger segregation, 1906, 1907	27-30, 156-165
Milk inspection, scoring cards, etc.	56-67, 166-171
Reports and records of service rendered: publicity	5, 6
Requisite to intelligent budget	14-16
Difficulties of securing accuracy	19-21
Of department of health	10, 17-19, 25
As revised in 1907, method of devising	12, 21, 22, 46-153
Lead to improved organization	30, 31
School inspection, medical examination, etc.	15, 16, 92-105

## MAKING A MUNICIPAL BUDGET

FUNCTIONAL ACCOUNTS AND OPERATIVE STATISTICS

DEPARTMENT OF HEALTH, CITY OF NEW YORK

PREPARED AND PUBLISHED

BY THE

BUREAU OF MUNICIPAL RESEARCH

NEW YORK, 1907

A limited number of copies of this report may be obtained at

50 CENTS EACH

Columbia University  
in the City of New York

LIBRARY



# MAKING A MUNICIPAL BUDGET

FUNCTIONAL ACCOUNTS AND OPERATIVE STATISTICS

FOR THE

DEPARTMENT OF HEALTH OF GREATER NEW YORK

PREPARED AND PUBLISHED

BY THE

BUREAU OF MUNICIPAL RESEARCH

NEW YORK, 1907

A limited number of copies of this report may be obtained at

50 CENTS EACH

Business  
D684  
B894

JUN 7 1955 PD

## PREFACE

This is the first of a series of reports by the Bureau of Municipal Research on the general subject of *Budget Making*. It is addressed to taxpayers who wish to know what benefits their taxes buy and what community needs are not provided for; to municipal officers who wish to obtain public support for efficient, far-seeing administration; to civic bodies, who aim, by informing public opinion, to improve municipal government; and to philanthropists seeking opportunity for productive fields of benefaction.

The successive steps in the inquiry are set forth chronologically for the light they throw on methods of municipal research and of co-operation with city officials.

## BUREAU OF MUNICIPAL RESEARCH

### Trustees

Edwin R. A. Seligman, Chairman  
Frank Tucker, Vice-Chairman  
R. Fulton Cutting, Treasurer  
Richard Watson Gilder  
George McAneny  
Albert Shaw  
Carroll D. Wright

### Administrative Council

William H. Allen, Secretary  
Henry Bruère, Director  
Frederick A. Cleveland, Technical  
Director  
Rufus E. Miles  
William R. Patterson  
Paul C. Wilson

Gift

Mrs. Robert M. Hoig

## Introduction

No document can tell in such condensed form so many significant facts about community needs and government efforts to meet those needs as a properly constructed budget. In view of this fact it is rather surprising that budget making as a method of publicity has heretofore been generally neglected in American cities. Perhaps it is because we are accustomed to think of the characteristics of publicity rather than its source or method. We describe certain qualities of publicity such as intermittent and constant, explosive and cumulative, whispered and advertised, ineffective and effective; but rarely have we set over against each other, the publicity about government that originates with private citizens, newspapers or magazines and that other publicity about government which originates with governing officials through public statements and published reports. The publicity of the latter kind that originated with New York City's officials in 1906, more particularly with its budget makers, only added to confusion and helplessness on the part of the public.

Publicity  
by  
Officials

Because the current records and reports of various departments were not so kept as to disclose their meaning readily, the greater part of this Bureau's\* effort from January, 1906, to August, 1907, has been directed to securing methods of accounting for moneys spent and for recording work done that would clearly and promptly show the results of municipal activity in its various phases. Its emphasis upon system rather than personnel, upon provable results rather than pretensions, has been due to the double conviction, (a) that inefficiency will almost invariably be found together with unbusiness-like organization and methods; (b) that the most effective

Original  
Sources of  
Effective  
Publicity

\*Known as the Bureau of City Betterment, January, 1906, to May 3, 1907; then incorporated as the Bureau of Municipal Research with the following program:

To promote efficient and economical municipal government; to promote the adoption of scientific methods of accounting and of reporting the details of municipal business, with a view to facilitating the work of public officials; to secure constructive publicity in matters pertaining to municipal problems; to collect, to classify, to analyze, to correlate, to interpret and to publish facts as to the administration of municipal government.

The Bureau will gladly answer questions that may be prompted by this report

publicity must proceed from records and accounts devised for the purpose of informing responsible officers and the public as to government results and community needs. In its study of street paving contracts, department of street cleaning, city owned houses, and the administration of the office of the president of the borough of Manhattan, it learned by a careful analysis of conditions that the city's method of attending to the various duties involved was calculated to conceal and promote inefficiency, confusion and corruption. Facts, and conclusions based upon facts, found from the start a cordial, appreciative welcome at the hand of city officials, civic leaders, editorial writers and the general public, and led invariably to improvement of conditions described. It seemed advisable, therefore, in August, 1906, to call attention to the city's hit-or-miss method of making its budget; i. e., of distributing its annual tax levy of \$130,000,000, voted for the discharge of those duties that have grown out of common acts, common needs and common properties.

It would have been easy to criticise on theoretical grounds the existing method of budget making. The community would not have been surprised to be told that \$130,000,000 was voted away annually without proper questions being asked as to the services to be purchased. All observant citizens knew that department heads asked for more than they needed in the hope of getting a substantial increase in spite of the arbitrary horizontal cut of ten to twenty per cent almost invariably made by the board of estimate and apportionment. Numerous stories could have been told of money asked and voted for one purpose that had been used for entirely different purposes. Next year's revenues were mortgaged to do this year's work, but the public did not realize that this "penny wise, pound foolish" practice reduced year by year the purchasing power of the dollar paid for taxes. Supplementary appropriations and transfers from one fund to another concealed the weaknesses of the budget, and rarely came to light in the succeeding budget; consequently, popular phases of work were emphasized at budget sessions, and appropriations less popular or questionable were rushed through at regular meet-

Budget  
Study  
August,  
1906

Two Methods  
of Urging  
Budget  
Reform

ings of the board of estimate and apportionment when crowded calendars prevented adequate consideration. No serious doubt would have been expressed had the Bureau claimed that at least \$10,000,000 could be saved annually by introducing business-like methods of budget analysis. But such a discussion of the abstract principles that should govern budget making even when illustrated by existing defects would have resulted in little if any action. Realizing this, and appreciating the educational advantage of an object lesson, the Bureau set out to prepare a budget for one department in a way that would demonstrate the value of a clear showing of just what work it was proposed to do with the funds requested. For reasons of expediency it was decided to present the claims of the health department, which happened at this time to be in particular need both of funds and of public support.

In thus approaching budget making from the standpoint of health administration, the Bureau aimed to avail itself of the line of easiest access to public attention and conviction. No one has the courage to defend inefficient health administration. No one says "Let well enough alone" when told that health officers are neglecting their duties. Everyone has a vital interest, that he can be easily taught to picture, in the adequate protection of public health. Finally the department of health was in position to make out a clear case before any jury; it had definite work to do and could clearly describe why that work should be done. Therefore, it was decided to use the appealing power of health needs to illustrate the principle that should govern budget making for all departments. As is told on page 11, the fiscal authorities responded by committing themselves at once to the proposition that henceforth in New York City money shall not be voted until the fiscal authorities and the public are told for what purposes the money will be used, how much was used for similar purposes last year and why the decrease or increase, if any, in the amount of work proposed.

The board of health was prepared to welcome the Bureau's request for co-operation in framing a health budget based upon a clear analysis of the city's health needs as shown by the department's experience. During

Approach  
via  
Health  
Needs

Why Health  
Officers  
Welcomed  
Suggestion

the winter and summer of 1906, the public mind had been greatly agitated over various conditions said to be menacing public health. Milk was dangerous because contaminated; lodging houses were spreading tuberculosis and other diseases; grave fears were entertained because the sources of water and ice supply were contaminated; hundreds of thousands of children were said to be in need of medical, dental and ocular care; streets were littered with rubbish; garbage was tardily collected; black smoke was polluting the air day and night; an anti-noise society became necessary; impure drugs, meats and other foods were sold in violation of state and national laws. The department of health was in the habit of meeting complaints in two ways: (1) It protested that it had insufficient funds. (2) To correct the evils complained of most bitterly in the morning it borrowed men engaged in correcting other evils, only to learn in the afternoon that Paul had been crippled to help out Peter. A strong appeal by a private society led the mayor before leaving on his vacation to ask the unanimous consent of the board of estimate and apportionment to act upon a resolution giving the department of health \$100,000 for hot weather emergency work; by August it was obvious that the greater part of the money had been absorbed by activities not contemplated in the appropriation. For several years prior to the inquiry the board of estimate and apportionment in fixing the amount of the health budget had made a cut of 18% to 42% in the estimates presented by the board of health. In doing this the fiscal authorities had made no attempt to determine the exact needs of each of the many functions exercised by the department of health. They had required no statement of cost of conducting these several functions, and no contrasting exposition of work accomplished. Arbitrarily assuming an exaggeration in the department's estimate the fiscal authorities arbitrarily shaved down the requests in determining the amount to be apportioned in the budget. While the department's experience justified the hope that supplementary appropriations would be made and revenue bonds issued, it never knew in what amounts these additional funds would be granted or how far short they would fall of the department's needs. The

Penalties  
for  
Hit-or-Miss  
Budget  
Methods

doling out of appropriations bit by bit through the year prevented the department from utilizing to the best advantage what funds it did receive. In laying out its plans of work at the beginning of each year, the department was placed in the dilemma of immediately curtailing its activities to correspond with its limited appropriation, or of continuing its work on a scale larger than the budget justified, on the chance of securing bond issues when the regular appropriation was exhausted. Under such circumstances, the department of health could adopt no far-reaching policy or plans with any assurance of carrying them out. In other words the health department lived from hand to mouth, borrowing from July to do April's work, prevented by budget methods from being efficient and economical, from taking at each season the stitch in time that saves nine. For the foregoing reasons the commissioner was prepared to see the force of the Bureau's suggestion that the best way to increase funds and to earn public confidence was to show clearly what the community needed and to place squarely upon the fiscal authorities the responsibility for failure to undertake the entire amount of health work required.

After consultation with the Mayor, Commissioner Darlington agreed to the plan of the Bureau and cordially facilitated its execution. The staff of the department cooperated in every way with the Bureau's investigators. The medical officer, Dr. Herman M. Biggs, the commissioner's chief assistant, Dr. Walter Bense, and various division heads welcomed the obvious opportunity to strengthen the department's case and contributed most valuable suggestions.

#### Proposed Study of Health Department

The statement of the health situation contemplated by the Bureau aimed to cover the following points:

(1) The functions or lines of activity maintained by the department in answering the questions: What kinds of work is the department trying to do; what forms of danger is it planning to guard against?

(2) The service rendered in each during the latest period for which reports were available.

Elements  
to be  
Studied

- (3) Cost of maintaining each activity or function.
- (4) A comparison of service with cost in each activity or function.

(5) Proposed expense for each activity or function for the ensuing year with detailed estimates and comparisons and with reasons for changes.

Before an accurate statement of the functions and activities of the department could be made, an extended inquiry was found to be necessary, inasmuch as the organization,—the assignment of duties, and the distribution of responsibility among officers and subordinates—was not explicit and did not appear on the records.

The reports and records of service performed were ill-adapted to meet the demands for information needed in budget making. The prevailing forms of annual report did not present all the significant facts; the relation between facts given was not made clear; the items were sometimes in terms ambiguous to anybody but the department officials, not infrequently being understood by no one but the clerk who compiled them; the figures were obtained from fragmentary records; statements of fact that related to each other were scattered through the report, their value being lost because there was no index; when found, the data were in such different form that comparison was difficult or impossible. Likewise the accounting system of the department did not readily lend itself to obtaining information as to cost. The classification in use was by "funds" or "appropriation accounts" which in most cases did not represent clearly defined functions or activities of the department. For example, out of the school inspection fund were paid not only the medical inspectors of schools but the school nurses and the so-called summer corps, consisting of physicians and nurses engaged in house-to-house visits to discover babies suffering from summer complaint, and to instruct mothers in their care.

Furthermore, the fund or account to which an item of expenditure was charged did not necessarily indicate what function of the department actually received the benefit of it. In salary accounts, an employee's salary might be charged to a function to which only a part or none of his services were devoted. Sixty-eight physi-

Service  
Data Not  
Obtainable

Cost  
Data  
Not  
Obtainable

cians, for example, having been charged to "school inspection" were never engaged in school inspection. Similarly supply accounts failed to show in what proportions the different activities consumed supplies that were purchased in bulk. Even when fund did correspond with function—when supplies were used only by the activities to which they were charged—the expenditure shown in the supply accounts frequently did not represent true cost for the reason that the books showed money paid out for supplies and not supplies used; to assume that supplies purchased are supplies consumed is analagous to assuming that money deposited in a savings bank is money spent—a fallacy apparent to the novice. From the financial records used in August, 1906, a complete and accurate statement of costs for the different functions could not be obtained.

In view of these difficulties it was seen to be impossible in six weeks to formulate a restatement of the entire departmental estimate, together with supporting statements of cost and service, in time for the budget for 1907, which must be ready for consideration by the board of estimate and apportionment in October.

It was, however, found to be feasible, with some investigation, to classify salaries and incidental expenses according to function, that is, according to departmental activities; and since salaries and incidental expenses constituted about two-thirds of the total expenses of the department of health it was determined to present a classified statement of them to the board of estimate and apportionment to function, that is, division of work. The resolutions of the board of estimate and apportionment and the board of aldermen are repeated (Exhibit 3) because it is considered that in the evolution of the American budget those documents will prove to be epoch-making.

That the purpose to put the principle into operation has not been lost sight of is evidenced (a) by the circular letter issued May 28th, 1907, by the finance department to the heads of departments, calling their attention to the above resolutions and requesting them to confer with the comptroller on the form of their estimates, and (b) by the comptroller's appointment of a joint com-

Expedient for  
Budget of  
1907

Success  
of  
Expedient

mittee of representatives of the Bureau and the department of finance to prepare classifications for the budgets of several of the major departments, i. e., water supply, gas and electricity; Bellevue and allied hospitals; department of street cleaning; health department; police department.

### Reorganization of Administrative Records and Accounts

After the adoption of the budget for 1907, the Bureau, pursuing its original purpose, suggested that the department make such changes in administrative records and accounts as would enable it to report readily and accurately both service rendered and the cost of maintaining each function. In April, 1907, following numerous conferences, important modifications in methods of accounting were recommended, (a) revised classification of accounts corresponding accurately to functional activities, in which disbursements should be charged strictly according to their use; and (b) a system of store accounts which, in connection with inventories, would render statements of cost possible for any desired period. The former recommendation, in its main lines, has been adopted and is being put into effect for the coming budget. The second recommendation has not yet been adopted. (See page 29). The problem of modifying the service reports and records, it will be seen, had to be approached somewhat differently from that of the accounts. In the latter, it was perfectly clear what should be shown, i. e., the costs properly chargeable to each function. The only question was as to the mechanism by which to show it most satisfactorily. With the service reports, however, the primary question was: What are the significant facts that should be shown; by what standard can success or failure be judged in each line of activity? The question of mechanism was here secondary. A series of conferences with the various executive officials of the department was therefore necessary to determine the essential facts of its activities. The result of these conferences was the series of tabular forms presented in Exhibit 4 of this pamphlet, which have been adopted by order of the commissioner for the purposes of the annual report. The

Improved  
System of  
Accounts

Revised  
Service  
Records  
Adopted

changes in office records necessary to meet the new report forms are now in progress.

With the information thus provided for, the Bureau believes that the public, through its immediate financial representative, the board of estimate and apportionment, will be enabled to render a far more intelligent answer to the annual question: How much ought New York City to spend for the purpose of maintaining the public health?

### Analysis of Lines of Activity

It is the duty of the department of health, as outlined by the charter, to provide by suitable measures and by means of the sums appropriated to its uses, conditions looking "to the preservation of human life, or to the care, promotion and protection of health" in the City of New York. The lines of activity which the department is maintaining constitute its answer to the question: "What are the health needs of the city that are most important to meet?" The need that the milk supply be pure is recognized in the inspection of milk; to the need for reducing the prevalence of tuberculosis, the department's response is the maintenance of district inspection, clinic and sanatoria. The department is, of course, *aware of needs* which have *not* yet been *met* by any organized effort on its part, owing to the fact that its resources are not unlimited. It is fair to say, however, that the *activities now maintained* are an expression of its judgment as to the *measures most immediately necessary* to the public health.

The lines of its work that constitute direct public service are as follows:

- General sanitary inspection
- Milk inspection
- Food inspection
- Inspection of mercantile establishments
- Lodging house inspection
- Shore inspection
- District medical inspection of contagious diseases
- Medical inspection of school children
- Summer corps

General  
Functions  
of  
Department

Functional  
Activities

Administrative  
Divisions

Vaccination  
 Disinfection (including goods wagon service)  
 Inspection of animals  
 District inspection of communicable diseases  
 The tuberculosis clinics  
 Willard Parker and reception hospitals  
 Riverside hospital  
 Kingston avenue hospital  
 (including ambulance service)  
 Otisville sanatorium  
 Trachoma hospital  
 Removal of dead animals, offal and night soil  
 Research laboratory  
 Chemical laboratory  
 Vaccine laboratory  
 Diagnosis laboratory  
 Department stables  
 Drug laboratory  
 The executive and clerical divisions of the department  
 are the offices of the  
 Commissioner  
 Secretary  
 General medical officer  
 Sanitary superintendent and assistants  
 Registrar of records and assistants  
 Chief clerk  
 Assistant chief clerks  
 Assistant corporation counsel

In each of these various lines of activity there is the double problem (1) of arriving at costs and (2) of reporting service results in such form as to render these, as far as possible, definitely measurable and comparable with costs.

## Reports of Service Results

The answer to the question, "What expense is incurred to maintain a given activity?" tells little without the answer to the corresponding question, "What service is rendered by means of that expense?" Whether administration has been economical or wasteful can be determined only by contrasting cost with service results.

And the more important question, "How far are the health needs of the city being met, irrespective of costs?" can be answered only through the reports of service. Wherefore, the necessity for reporting service results, especially at the time of considering the budget.

Recognition of this necessity is found in various public papers. The annual circular letter issued to heads of departments by the board of estimate and apportionment calls for full explanation to accompany the estimates, stating the reasons for any increase or decrease in the amounts. The following extracts from the letter of transmittal accompanying the estimate of the board of health for the year 1906 are to the same point:

"The board of health most urgently requests your critical consideration of this estimate, for they feel that the more you investigate the requests for the various funds the more you will be convinced that they are reasonable and necessary, and that the sums, if so appropriated, will not only be used wisely but their use will result in great and *demonstrable benefits* to the city.\*\*\* While it may appear to your Honorable Board that the sums expended by the department of health are large, the board of health feels confident that *a careful study of the results* attained will convince you that the *cost is really insignificant as compared with the benefits secured*. \*\*The board of health is confident that *the ratio of increase in the annual budget to the decrease in the death rate* will surely be maintained should your Honorable Board consent to the award of our estimate as herewith transmitted."

In practice, however, department estimates reveal little or no systematic attempt to demonstrate or justify their services or needs. A typical example of the "explanation" accompanying department estimates is the following statement in the budgetary estimate of the department of health for the year 1907:

"The increase of \$39,600 for medical school inspection, as shown above, is requested to pay the salaries of thirty-two new medical inspectors, at \$1,200 each, distributed among the various boroughs, as indicated above, and of one additional nurse, at

Necessity  
of  
Reporting  
ServiceNecessity  
RecognizedNo Service  
Reports  
In Connection  
With  
Budget

## MAKING A MUNICIPAL BUDGET

\$1,200, in the borough of Manhattan. These are required to keep pace with the constantly growing school population throughout the city."

How the estimate of just thirty-two inspectors and one nurse is arrived at does not appear. No statement is presented to show the results of the work previously performed by school inspectors or to prove the necessity of any additional inspectors. It would require little more space and would convey far more information, to present a brief table like the following:

	1907 (Actual)	1908 (Estimated and Proposed)
Total registration in public schools..	*500,000	*600,000
Number of children examined.....	200,000	600,000
Percentage of total registration.....	40	100
Number needing treatment.....	60,000	180,000
Percentage of those examined needing treatment .....	30	30
School physicians .....	80	160

Possible  
Service  
Report  
To  
Support  
Estimate

"The estimated increase in the number of inspectors necessary to examine as proposed all the children in the public schools could be set forth as follows: With the present number of inspectors, 40% of the children have been examined; to examine all, an increase of 150% in available service is therefore necessary; with the present assignment of schools, inspectors spend on an average only about 60% of their time in actual service, the remaining 40% being consumed in traveling about. With an increase of 100% in the number of inspectors, the time wasted in traveling could be cut down from 40% to 10% of the time of each inspector, each therefore performing 50% more work for the same compensation as at present. In other words, where an inspector now examines 2,500 children a year, he could then examine 3,750 a year. An increase of 100% in the number of inspectors is therefore requested, with which resources the department pledges itself to examine all the children in the public schools." *Such a request* expressed in definite terms would, if the appropriation were granted,

\* The figures given in this paragraph for purposes of illustration are entirely fictitious

## HEALTH BUDGET, NEW YORK CITY

become a *matter of record against which might be checked up the actual performance of the following year.*

It might be supposed that the statistics of service, though not presented (perhaps because not demanded) with the departmental estimate, would certainly be found in the annual departmental report. An examination, however, of the last published annual report of the department of health (that of 1904) shows no such information. Out of some fifty pages of statistics of service presented in the report, twenty-two are devoted to hospitals, seven to a list of vacated premises and four to legal action taken on violation of the law, leaving thus only about ten pages to the important work of the division of inspections and the division of contagious diseases. The amount of space devoted to the different lines of work, it is seen, is not in any way proportioned to their relative importance. Moreover, the statistics relating to any activity have to be sought through the entire report, being scattered and unindexed, sometimes even being impossible of identification from lack of titles. The figures for the various boroughs, if given at all, are not always in similar form, thus rendering comparison impossible, either of one year with another in the same borough, or of borough with borough. Of the facts necessary to estimate the results accomplished, essential items are not infrequently missing.

For example, the statistics of milk inspection in the annual report for 1904 are in several sections as follows:

Page 67	Number of inspections (unobtainable, being included with inspections of fruit, food, meat, etc., in a grand miscellaneous total) .....	587,682
	Number of specimens of milk examined .....	16,152
	Number of specimens of milk collected for analysis.....	2,097
	Number of quarts of adulterated milk destroyed .....	4,539
	Number of analyses.....	1,011
	Number of permits issued.....	15,299
	Number of arrests.....	565

Annual Reports  
Defective in  
Presenting  
Service Results

Number of persons held on bail.....	373
Number of persons discharged.....	25

No indication is given as to whether those facts relate to one borough or to the entire city. Whatever the part of the city to which they do relate, the information becomes of little value from the lack of the important item—number of milk inspections. Without this figure it is impossible to infer whether a store is, on the average, inspected once a week or once in six months. The number of permits is furnished, but not the number revoked; no indication is available of the average number in force which the inspectors should be held responsible for inspecting. Why the number of analyses is more than one-half the number of specimens collected for analysis is a matter of conjecture, as is also the number of analyses showing adulteration and therefore necessitating further action. Finally, nothing is stated as to what became of the 167 persons arrested who were neither discharged nor held on bail.

The second group of statistics relating to milk inspection is on pages 79 and 80, as follows:

Work Performed by Milk Inspectors

Number of inspections.....	40,169
Number of specimens of milk examined.....	47,624
Number of specimens of milk collected.....	4,212
Number of quarts of adulterated milk destroyed..	28,621
Number of arrests .....	408
Number of persons held on bail.....	338
Number of persons discharged.....	19
Number of persons dismissed.....	1
Number of persons acquitted.....	2
Number of sentences suspended.....	52
Number of trials.....	406
Amount of fines .....	\$7,340

As before it is not stated whether these facts refer to one borough or to the entire city. A comparison of the figures, however, (p. 79 with 67), leads to the supposition that (the totals being larger) the latter group of inspections, specimens, etc., relates to the entire city, and the former group to one borough. The number of arrests, however, being smaller, indicates that the number of arrests given in the first group probably includes some

Illustrations  
of  
Defective  
Reporting

relating not only to milk inspection, but to other lines as well. The number of permits issued, revoked, or in force, is not mentioned, nor the results of analyses of specimens stated.

On page 153 appears the single item:

Permits to sell milk.....2,781

Since this item appears in a table directly above the signature of the chief sanitary inspector for Manhattan, it is to be supposed that the number refers only to that borough; the question arises, however, when comparing this figure with the number of permits issued as given above, 15,299, how it happens that Manhattan, with over half the population, appears to have issued only a little over one-sixth of the entire number of permits. It does not appear in what boroughs the inspections were made; no basis is given for estimating the average frequency of inspection of stores or of wagons; nor is the number of discovered violations related to the frequency of inspections.

The endeavor to obtain the facts of service results for budget purposes encounters two main difficulties which should be recognized at the outset, the first relating to definiteness and the second to accuracy. For budgetary purposes it would be most satisfactory if the results following from the expenditure of certain sums of money were as definitely measurable as the product of a silk mill or a nail factory, but as a matter of fact, it is quite otherwise. It is often difficult and sometimes impossible to ascertain exactly what are the service results from given expenditures. As to the immunization of well persons exposed to diphtheria by the administration of anti-toxin, it can readily enough be stated that only a very small number contracted the disease; but, obviously it is quite out of the question to state how many cases were averted, because there is no means of knowing how many cases would have occurred without the injections. For much of the work of the department of health, being in greater or less degree of a preventive character, it is impossible to state absolutely the results. Who can assert positively how many cases of scarlet fever were prevented by means of quarantine or by removal of cases to hospitals? In such cases the only recourse is to show

Difficulties  
of  
Securing  
Accurate  
Service Reports

by means of a table covering a series of years that there has been, parallel with the increased activity of the board of health, a gradual decline in the number of cases occurring; that the epidemics, when they do come, are less serious than formerly. Many of the activities of the department, however, are capable of measurement. Children with adenoids are much more likely to succeed in their school work, if properly operated on, than if left untreated; here results can be stated in percentage tables. Each line of activity, it was found, demands a standard of its own, by which its achievement can be fairly judged.

A further limitation upon the value of service reports is imposed by the necessary method of their formulation, which is substantially as follows: Either the departmental employee or his immediate superior (a foreman of some kind) makes a report of work performed which becomes a part of the office records. These are summarized and re-summarized for the purpose of each successive superior official to assist him in his administrative control over his subordinates. The final step is the report of the commissioner to the public, represented by the mayor, upon the work of the department as a whole. Throughout there is constantly in operation the tendency on the part of the one rendering the report to present the case in a light as favorable as possible to himself. The tendency may vary in degree from nothing more than a discreet failure to emphasize disagreeable facts to an actual falsification of the report. To reduce to a minimum the possibility that reports will conceal or withhold facts damaging to the employee, division or department that makes the report, two precautions are needed:

(1) The forms of administrative record and report should, so far as possible, be capable of ready proof and verification.

(2) They should be currently verified through examination and comparison at department headquarters.

(3) Inspection by the department of its subordinates should be such as to ascertain whether work reported on records to have been done, is actually done; which result requires that the report be specific as to time, place, etc. With few exceptions, a department official, who is honestly desirous of furnishing efficient service, will admit

Means Suggested  
for  
Meeting  
Difficulties

the necessity of such reports and will co-operate in devising them; with few exceptions, officials who profit from misstatements will make a show of candor and will lack the courage to oppose adequate checks on records of work done.

(4) The commissioners of accounts, bureau of statistics, comptroller, mayor, or whatever office is financially responsible to the tax payer, should periodically investigate departments to see whether or not proper methods of verification are in force, and whether these adequate tests are constantly applied. In other words, there should be an examination of service records analagous to the examination of accounts known as audit, thus providing each department head with administrative control over his subordinates, and the city as a whole with administrative control over department heads. By these two means, the reports of service rendered can be made sufficiently accurate to serve as bases of estimate in framing a budget.

Having clearly in mind the above mentioned difficulties the effort was made to provide for service reports which could be correlated with facts of expense as a basis for the health budget. The two steps in the process were (1) to ascertain the significant facts and (2) to devise forms which would present these facts most clearly with a minimum of effort to the reader. To each of the lines of activity of the department the following scheme was applied:

Method of  
Devising  
Service  
Reports

### Analysis

*Specific object* of each line of work; also the ultimate health object, if that can be stated.

*Activities* designed to accomplish that object.

*Relation of activities to object.* In what common terms can they be compared? Are there any definitely measurable health facts which can be shown to follow as a result of the activities in question? If not, how strong a presumption can be established?

Whenever the object can be stated in measurable terms, independently of the amount of work done, there should be such statements, to show *how far the object is being achieved.*

Whenever the object is not thus independently measurable, a *presumption as to the degree of success* should be established by means of a logical arrangement of the statements of amount of work done.

From such analysis of the several lines of work, the forms of report were devised. Some of those are composed of facts already presented by the department, but rearranged; others, while based on the system of records now maintained in the department, are somewhat fuller in statement than those of the present annual reports. In some instances they require new methods of record keeping, though not necessarily additional labor. The form in which the facts are presented are specially designed to facilitate comparison of different years, each borough by itself, and, so far as conditions justify, borough with borough, it being only through such comparison that full value can be derived from statistics of service.

For some of the administrative divisions mentioned on page 13 it will be observed that report forms are not included, though of course all of them are provided for in the system of accounting. The purely executive and clerical divisions, while necessary to the achievement of results, are not susceptible of accurate measurement in any form available for an annual report. Their efficiency must be judged by special examinations. Hence, no tables are suggested for the general administrative offices of the commissioner, secretary of the board, general medical officer, sanitary superintendent and assistants, registrar of records and assistants, chief clerk and assistants, the assistant corporation counsel, or drug laboratory.

Consideration of several of the lines of work raises points which require fuller discussion. It will be noticed that the tables dealing with infectious diseases have made use of the number of *cases reported* as a basis of comparison, rather than the number of *deaths*. It is a common practice among boards of health to present as evidence of the success of their work figures showing a diminishing general death rate. The main reason for this is doubtless that more accurate figures can be obtained for the general death rate than for any other standard. It is virtually impossible, in New York City, to escape reporting deaths; while of cases of contagious and communicable diseases actually occurring and recognized as such, the proportion reported may vary considerable, borough with borough month with month.

These are, however, several inaccuracies in judgments as to efficiency of health boards based upon changes in the general death rate:

Death Rate as  
Criterion  
of  
Public  
Health

(1) During the last several decades there has been in civilized countries a steady decline in the general death rate; hence a decline of itself cannot in any particular locality be quoted as evidence of the efficiency of the local health body.

(2) Case fatality differs widely among different diseases and even in the same disease under different circumstances; hence the death rate, either general or for any single disease, cannot accurately indicate the amount of sickness.

(3) Because the bulk of the work of a department of health is not curative but preventive, far reaching remedies might not immediately be reflected in the reduction of mortality.

As a matter of theory, it is evident that the success of *preventive* work is measured by the degree in which *prevalence* of disease (morbidity) is diminished; success in *curing* disease is measured by a *decreasing proportion of cases resulting in death* (case fatality); while, strictly speaking, the death rate (number of deaths per 1,000 or 10,000 of population) is an index of neither prevention nor cure. It becomes a question, then, of how far the number of cases reported can be made a reliable index of the number of cases actually occurring. The chief possibilities of statistics being inaccurate would seem to be the following:

(1) Not all the cases of any disease actually occurring and recognized as such are reported by physicians to the department of health. The proportion a reported varies: (a) according to the seriousness of the disease, i. e., the likelihood of the physician's being detected, in the event of the patient's death, in not having reported the disease. There is nowhere the completeness of reporting in measles that there is in small-pox. This is serious where the figures are presented for *each disease separately*, neither combined nor compared with those of other diseases, (b) according to the pressure brought to bear upon physicians by the head of the respective divisions in the department of health. This invalidates a comparison of one city with another: but within one city would be largely overcome by care on the part of the executive officials of the department to secure uniform-

Cases  
Reported  
as  
Index of  
Disease

Inaccuracies  
Due to  
Case Rates

ity of practice in the different boroughs; (c) according to differences of policy in successive periods or administrations: When the department of health begins a more vigorous campaign against any specific disease, an immediate result is likely to be an increased thoroughness on the part of physicians in reporting the cases. In tuberculosis, for example, the number of cases reported to the department had been steadily rising every year for a decade or more, until in 1906 in Manhattan the new cases reported showed a decrease from those of 1905. On the other hand, a relaxation of pressure by the department for any reason, would result in a falsely favorable showing.

(2) Inaccuracies of diagnosis. In general, the department of health accepts the diagnosis of the attending physician who reports the case; which diagnosis may prove to have been an error. Where the error is quite clear, the department commonly drops the report as "no case": the false diagnoses remaining are probably not numerous.

Precisely to what extent the considerations mentioned would vitiate the use of the case rate as a measure of success, over a series of years (allowance being made, of course, for epidemics), it is impossible to assert. The difficulties are chiefly only possibilities, which might be largely eliminated or allowed for in practice. On the other hand, mortality figures could never, under the most favorable circumstances, be a closely accurate standard: they should be used only for lack of better. "From an economic point of view, *sickness is more important than death*; it is the amount and duration of sickness rather than the mortality that tell on the prosperity of the community. \* \* \* Mortality statistics necessarily ignore all that precedes the close of life." Since the use of the tables proposed does not involve an abandonment of the mortality standards, so far as they are of value, they would seem to afford a probable gain, with no possible loss.

Comparison for  
Series of  
Years

In any vital statistics, whether of prevalence or of mortality, conclusions must of course be based on the figures, not for a year or two, but for a series of years, the length of time varying in different instances. Five

years is probably as short a time as will indicate, in most instances, any tendency that can be regarded as significant: while not less than fifteen or twenty years would be necessary to cover the periodical waves well recognized in contagious diseases. The figures for long periods belong in the report of the division of records, and are there given at present in respect to mortality, but not to cases reported. Short term statements, however, covering perhaps five years, may well be given directly in connection with the statements of work done by the divisions of contagious and communicable diseases, to be applied not as a strict standard of their success or failure, but as an approximate indication of the adequacy of the work done.

Short Term  
Statements of  
Limited Value

#### Service Tables Recommended and Adopted

The form in which the tables are presented in Exhibit 4 is that which would have been used in the annual report for 1906, if such a plan had been determined upon early enough to afford the necessary figures. In putting the plan into operation, it is understood that many of the figures for past years are not now available, and it is not suggested that any undue amount of effort be spent upon securing them. The records necessary to the form of report are now being instituted by the department and will in a few years provide all the facts called for by the tables.

#### The Accounting System of the Department of Health

In 1906 the principal records maintained by the department of health were: appropriation and fund ledgers, order register and liability book, excess and rebate book, trial balance book, contract register (tabulation book) and segregation ledger.

*The Appropriation and Fund Ledgers* were records kept with each appropriation and bond fund against which were entered all vouchers properly chargeable thereto. The entries were made after the vouchers had been finally approved. Each book was columnar in form, showing the amount of the voucher, the schedule number, the date, the name of the firm in whose favor

Principal  
Accounting  
Records, 1907

the voucher was drawn, the division or bureau for which the goods or materials were ordered, the voucher number, the date of the audit of the bill and the date that the voucher was sent to the comptroller. Instead of transferring unbalanced accounts of one year to a new ledger for the succeeding year, the ledgers themselves were kept open pending the final approval of vouchers chargeable to individual accounts.

Accounting  
Records  
Described

*The Order Register and Liability Book* was a record in which were entered all orders, whether contract or non-contract, sent out by chief clerks in response to requisitions (formal requests properly approved) from the several divisions and institutions desiring supplies. On receiving these requisitions, the supply clerk looked them over to ascertain whether the articles had been contracted for or not, and whether the goods requested should be obtained. When reviewed and initialed by the supply clerk, they were forwarded to the chief clerk, who, if approving them affixed his signature or initials. Orders were then prepared in original and five carbon copies. The original, with one copy, was sent to the firm from which the goods were ordered—the original to be retained and the copy to be delivered with the goods; a copy was sent to the division or institution requesting the goods; a copy was sent to the inspector of supplies; a copy was forwarded with the requisition; and a copy was held, to be transmitted with the bill and the voucher to the department of finance. The amount of the requisition was posted in the order register and liability book against the particular fund or appropriation drawn upon; at the same time, entry was made of the requisition number, the date of the order, the division for which the goods were ordered, the firm from whom the articles were ordered, the estimated or contract cost of the goods, the actual cost of the goods, the date received, the date of audit, the number of vouchers and the date forwarded to the finance department.

Because the estimated cost was often in excess of or less than the actual cost, the order register and liability book would need to be corrected after the final bill was received. Unless the difference between the actual cost and the estimated cost was noted, the order register

and liability book would show too little or too much money available for a particular fund, and the appropriation and fund ledger would indicate frequently that funds were available when funds were actually exhausted, or vice versa. All such excesses or rebates were entered in the *Excess and Rebate Book*, which is columnar in form, having a column for each month in the year and a page for each appropriation and fund.

Accounting  
Records  
Described

*The Trial Balance Book* was used as a means of determining the balance of appropriations. In it were recapitulated, in condensed form, the totals of charges against individual appropriations; the increases and reductions in estimates; the net estimated charges; the amount appropriated and the estimated balance of appropriations subject to order.

*The Contract Register* exhibited in tabulated form: contracts let for goods and materials to be delivered at stated intervals or upon requisition and order. This record was kept in two volumes, one for supplies, for which bills were rendered monthly, such as milk, meat, bread, fish, ice, mineral water, fruits and vegetables; the other for articles delivered upon requisition. In the case of the latter a pencil memorandum of requisitions made against contracts was carried until a bill was received when the pencil memorandum was changed to ink for permanent record.

*The Segregation Ledger* was a statistical record to which audited vouchers were posted. In this ledger each class of expense had its own account showing against which appropriation or fund audited vouchers should be charged. The accounts in this segregation ledger were in turn summarized according to appropriations and funds

#### Defects in the Accounting System Employed by the Department of Health

The defects in the accounting system above outlined may be said to be common to all of the department accounts of the city, namely, the controlled accounting records were those which pertained to appropriations and funds rather than to cost of operation. The pri-

Defects  
Typical of  
City's  
Accounting

mary purpose of these records was to show the amounts drawn from each item of appropriation and the available balance. The nearest approach to an expense record was a segregation ledger, but even this was not a true expense ledger and was installed as a convenience for administrative officers rather than as an integral part of the system.

It is true that certain items or groups of items were segregated, such as "horse hire" or "supplies and contingencies;" but instead of grouping segregated data about branches of work so as to show results according to administrative divisions, this record classified and grouped data according to appropriations and funds. It was only where the appropriation or fund classification corresponded to a proper classification of function and activities that the grouping had an administrative value; even in these cases a true statement of expense was not obtained, owing to the fact that the records showed in what amounts supplies were purchased rather than the amounts used. An administrative judgment should be based on the cost of a function or activity within a given time and not on the amount expended for purchase of stock; such administrative judgment was not made possible by the segregation ledger.

Another serious defect of the segregation ledger was that no method was employed for currently determining its accuracy. Its footings and balances were not compared with the footings and balances of the appropriation ledger, or with the order register and liability book. Therefore, helpful as this ledger was to an administrative officer wishing to learn general tendencies, it was not a reliable guide to administrative policy and to budget making.

#### Suggested Improvement

On request of Comptroller Metz and Commissioner Darlington, the Bureau submitted certain constructive suggestions looking toward the establishment in the department of health of an expense record that would give to the administrative heads a true statement of the cost of each activity. The accounting suggestions were

True  
Expense  
Records  
Not Kept

made in general terms only but contemplated several important changes:

(1) The basing of expense accounts upon a record of requisitions for supplies, instead of upon vouchers for payment.

(2) The keeping of stock ledgers, one side of which should show charges against the store-keeper, the accuracy of which should be controlled from a record of vouchers; the other side of the stock ledger to give stock distribution and to be controlled through store-keepers' reports, showing in detail how each class of stock was distributed to departments or divisions. To prove their reports of goods distributed, store-keepers would have copies of requisitions; to prove the balance "in stock," they would have the results of an inventory of stock on hand. Entries from the store-keepers' reports to be posted to the several expense accounts affected by the distribution.

(3) The use of a classified pay-roll supported by time sheets, on which would be noted the departments or divisions of work on which the employee was engaged, the time sheet being a basis. Just as the store-keepers' reports would show goods actually consumed by an activity, so the time sheet would show time actually given by an employee to each activity. As the store-keepers' reports show supply cost, the time sheet would show the wage cost. The two combined would give, when verified by comparison with records of requisitions, stock ledgers and appropriation ledgers, a complete classified controlled expense record of each activity for the period reported on.

In defense of these suggestions it is worth while here to emphasize one or two propositions that have become axiomatic in the book-keeping of private enterprises: to segregate accounts does not increase the number of items to be posted; it is just as easy to post a charge or credit of \$25.00 for "horse hire" to a page headed "horse hire" as to a page headed "miscellaneous." The difference between high segregation and low segregation is not that the former requires larger outlay for clerical service, but that it actually decreases the difficulty of re-casting and recapitulating items necessary

Cost Means  
Goods Used  
Not  
Goods Bought

Time Sheets  
To Show  
Wage Cost

Advantage  
of  
High Segregation  
Over  
Low Segregation

in order to find out what has been posted in a ledger. Once installed, high segregation designed to answer significant questions would save a great deal of confusion and clerical labor, and would also show, where if at all, economies can be effected and efficiency increased.

#### **Expedient Suggested for Classification of Budget Estimates**

To the end that the department's budget might be classified according to the several functions and activities maintained, and as a means of enabling the department to draw off the information needed to support a budget so classified without further recapitulation, it was proposed that the segregation ledger be at once modified to serve this purpose. As a result of conferences between the Bureau, the health department and the finance department, a new segregation ledger was installed. (Exhibit 5.) This new record, however, is still defective in two particulars:

- (1) It lacks direct accounting control.
- (2) It is only a record of expenditures and not a record of cost of operation.

Further work in the improvement of the system of accounts has been temporarily postponed, pending action by the joint committee of the Bureau and the department of finance, which has under consideration a complete plan of organization of the departmental accounts of the city.

#### **Conclusion**

It is not suggested that the work described in the foregoing pages has arrived at completion. On the contrary, it is seen by the principal officers of the department of health and by the department of finance, as well as by the Bureau of Municipal Research, that many further steps are necessary to the efficient operation of principles already embodied in the forms of account, record and budget herewith submitted.

A system of service records, no matter how carefully constructed, will inevitably encounter in actual operation many difficulties not foreseen at the outset; a department that covers five boroughs and maintains a great variety of activities, can not change its ways in a day, because

the work of the department is constantly developing records which reflect that work must also progressively develop. How adequate records, promptly and properly studied, lead to improvements in work, to changes of method and to corresponding changes of records and accounts, is illustrated by a "merger," now under consideration by the department, of district inspection of contagious diseases with medical inspection of schools. The discussion of the plan is based entirely on a careful study of the daily records employed during the later months of the school year ending June 30th, 1907. The health budget for 1907 recognized the distinction between the division of contagious diseases and the division of medical inspection of schools; each division has its own separate pay-roll; the school physician did not go into homes to inspect contagious diseases; there was, therefore, no overlapping of work done, although there was an overlapping of territory traversed. To see whether time spent by inspectors on the street might be reduced, the following experiment was made in a small number of representative districts:

The school inspector was asked to take charge of both the school work and the contagious disease work of his small district, going to the schools first, and making a house to house inspection after leaving the school. Only one physician worked in one territory; this physician attended to all of the requirements of his district, included under the two headings, contagious diseases and school inspection. When the records of this plan were compared with the records of the prevailing plan (two men working in the same territory on different work) the following advantages stood out clearly in favor of merging the two functions in one man for a district fitted to the amount of work required: (1) Less time was lost on the street in going from inspection to inspection; (2) Consequently more hours were given to inspection; (3) Responsibility for a district led to more efficient service in each division; (4) Concentration of responsibility in one man led principals, parents, family physicians, hospitals and dispensaries to co-operate more readily and more effectively, in securing necessary treatment for school children and in checking contagion. The depart-

Progress  
Means  
Change  
of  
Records

Illustration

Items  
Segregated

ment has therefore decided to ask that its budget for 1908 make no distinction between the two divisions mentioned, but that it establish a new division: *School and District Inspection*. By giving to this merger of two divisions the funds given in the budget of 1907 to both divisions, it is estimated that the department could accomplish 50% more work.

Progress  
Means  
Change  
of  
Accounts

The foregoing illustration serves to show also how budget recommendations, as well as those bearing upon reports and accounts, will need modification after being tested. Whenever the budget is changed, ledgers and all controlling accounts will generally need some modification, as well as reports that record results of supervising and district inspectors.

Control  
Provided  
Should  
be  
Exercised

After the accounting records of the department have been reduced to control by the methods outlined on page 29 it will still be *necessary to see that the control is exercised*. As evidence of the danger that controlling records shall not be used for control may be cited the experience the department is now undergoing, in August, 1907, when no funds are at hand for paying employees of the bacteriological division. Accounts already installed show clearly to the commissioner, the board of health and the comptroller, not only that funds are lacking to meet this particular pay-roll, but also that the charging of the amount on this pay-roll to any other pay-roll is in direct violation of the principle of the segregated budget. There has been a great deal of discussion as to the steps that should be taken: Shall men working in the bacteriological laboratory be put on the school inspection pay-roll because that fund happens to have a surplus? If this change is made shall the department try to get it through the comptroller's office without the latter knowing of the mischarge? Shall it candidly put itself on record as passing this mischarge and submit an explanatory note with this pay-roll? Shall the comptroller's office wink at the mischarge and honor it after recording on the pay-roll the fact as to want of funds, thus admitting the unauthorized character of the transaction? Or, shall it notify the health department in advance to "hew to the line" of its instructions from the board of estimate and apportionment when the budget

Illustration

for this year was voted and simply withhold the pay-roll until funds are provided at the September meeting of the fiscal authorities? The latter course has been adopted. The principle of the segregated budget is thus re-affirmed by both the comptroller and the department of health.

While still experimental, the forms for account, record and budget of the department of health now in force are sufficiently definite to show clearly how far the health department is discharging its obligations and using its opportunities, and where, if at all, methods of administration need to be changed.

Defects  
Will Be  
Shown  
Currently

# ANALYSIS OF THE SALARY EXPENDITURE OF THE DEPARTMENT OF HEALTH OF THE CITY OF NEW YORK FOR THE YEAR

1906

Presented to the Board of Estimate and Apportionment by the Bureau of City Betterment of the Citizens' Union, October 12, 1906, for consideration in connection with the estimate of expenditure submitted to the Department of Health of the City of New York for the fiscal year

1907

New York, October 12, 1906.

To the Honorable, the Chairman and Members of the Board of Estimate and Apportionment of the City of New York.

Gentlemen:

At present there are thirteen appropriation accounts in the budget of the department of health. Your Honorable Board has in the past granted money to this department for eleven general purposes. There are, however, forty-nine functional divisions of the department, including all the boroughs. Nine of these are divisions of general administration, forty are divisions of work. Each of these forty divisions has its special work to do. The thoroughness and extent of the work of each division determines the health condition of the city as a whole.

How much sickness the department of health will prevent next year and how many lives it will save depends very largely upon the amount of money you grant that department. The department of health is striving towards a complete control of the health of the city—towards the complete prevention of preventable diseases and preventable death. How nearly this end is to be reached in 1907 is a question of dollars and cents. Briefly, it is a question of how much health the city can afford to buy.

In deciding how much health the city can buy it is necessary to decide how the buying shall be done. To make an allowance for the health needs of the city, you now (or later, the board of health), must determine how much health shall be bought through the treatment and prevention of tuberculosis, through the disinfection of infected houses, through hospitals, through an improved milk supply, how much through an improved physical condition of the children in the schools, and so on.

The lowering in the death rate per thousand of the population from 20.57 in 1900 to 18.32 in 1905 is evidence of the effective work of your health officials. This reduction means the saving, in one year, in a city of 4,000,000 population, of 9,000 lives. This saving of life is a vast achievement, but it does not represent all that the department might do. The fact that 27,670 persons died from preventable diseases in 1905 is in part an index of work undone. Not only might the 27,670 lives have been saved if the sanitation of the city had been perfect, but untold sickness with its accompanying misery and heavy financial cost might have been avoided, as well. How important it is to prevent illness is strongly shown by the great annual registration in the ranks of tuberculosis. In 1905 there were more than 20,000 new cases of tuberculosis reported.

If we are correct in assuming that the amount of health the city may enjoy can be measured in terms of dollars, we submit that your Honorable Board is primarily responsible for the health of the city—responsible for the lives lost through preventable diseases, responsible for sickness unnecessarily incurred. We ask that your allowance to the department of health on the basis of the work you expect it to do in its several divisions. For example, we ask you in granting funds for medical school inspection to determine how closely the health of the children in the schools of the city shall be guarded—how many abnormal and backward children shall be returned to health of body and mind by the cure

of wholly curable defects. We ask you to determine how many children shall be saved from suffering the handicap of one of the many contagious diseases which afflict the children of the city. We ask you to know exactly what has been done in the field of medical inspection of school children in this year, what its cost has been and what its results. We ask you to look carefully into the field of milk inspection to determine what it has cost this year to save thousands of babies from death by giving them pure milk, and then to determine exactly how many babies you can afford to save next year, and how many babies to save from sickness. Similarly, we ask that you demand information respecting the work of the department in every division for which an appropriation is needed.

We have during the past several weeks, with the permission of the commissioner of health, made a classification of the pay-roll expenditure of the department of health for 1906. This classification is made on the basis of the divisions of work that exist in the organization of the department. We have accounted for every man in the department pay-roll and charged his salary or wages to the division or divisions in which he was employed during the year. We beg leave to present the results of this classification for your consideration and, we hope, for your use in making up the health budget. It will show the pay-roll cost of carrying on the various activities of the department, grouped by divisions.

It has seemed unwise to include the data we have secured respecting the distribution of supplies and contingencies. A classification of supply expenditure should, of course, be included in the detailed statement to show the total cost of operation in the respective divisions. It is practically impossible, however, at this time, to satisfactorily forecast the distribution of the supply expenditure for the remainder of the year. We ask that, in the future, the department show, in its annual estimate, the distribution of supply and contingencies expenditure by divisions. It is suggested that these supply appropriations might be allowed under general titles for 1907, as they have been in the past.

The following statement is submitted with the thought that by contrasting the facts there shown with the results achieved by the department you may be guided in determining the proper allowances in 1907 for the several divisions of the department work. We believe that in this way you may assume a control proper to the function of your Honorable Board over the expenditure and activities of this department.

We suggest that the department of health be provided with funds to carry out the work of its several divisions as fully as the city can afford. We assume that no one will question that as much shall be spent on the health of the city in 1907 as will be spent this year. The expenditure of the department in 1906, exclusive of corporate stock, but including \$537,537.50 of revenue bonds and \$100,000 in receipts, will reach a total of approximately \$2,000,000. In 1907 the department will carry on certain new activities and these will require additional funds.

Respectfully submitted

BUREAU OF CITY BETTERMENT,

Citizens' Union of the City of New York,

By Henry Bruère, Secretary

### RESOLUTION OF THE BOARD OF ALDERMEN IN FAVOR OF A CLASSIFIED BUDGET

Whereas, During several years past, and especially during this present year, the heads of the departments of this city have felt compelled to request the issuance of very large amounts of special revenue bonds in order to meet their department's ordinary running expenses, explaining that the department's budget allowances had been greatly under the estimate submitted, and that the allowance had been so general and unitemized that the commissioner could not know what reductions were intended, and was not able to make a substantial and intelligent reduction; and

Whereas, This board believes that the public interest is opposed to the issuance of these bonds except for emergencies; and

Whereas, The 1907 budget is now in course of preparation by the board of estimate and apportionment to be later submitted to this board; therefore, be it

Resolved, That the board of aldermen respectfully recommends to the board of estimate and apportionment, that in the preparation of the budget for 1907, instead of following the usual course of making general and unitemized allowances to the general accounts of the various departments, that the budget do allow specific appropriation, indicating which estimates are granted and which are denied, in the case of every item in every account as they appear in the departmental estimate and that the expenditure of each allowance be confined to the purposes as so indicated, and to provide as far as possible, that no transfers be made, even for different items in the same account, without the authorization of the board of estimate and apportionment.

Adopted by the board of aldermen October 9, 1906, a majority of all the members elected voting in favor thereof.

P. J. SCULLY, *Clerk.*

October 9, 1906.

### RESOLUTION OF THE BOARD OF ESTIMATE AND APPOR- TIONMENT IN FAVOR OF A CLASSIFIED BUDGET

Whereas, The board of estimate and apportionment has received certain preamble and resolutions adopted by the board of aldermen, October 9, 1906, requesting "that the budget do allow specific appropriations, indicating which estimates are granted and which are denied, in the case of every item in every account as they appear in the department estimate, and that the expenditure of each allowance be confined to the purposes as so indicated," etc.; and

Whereas, Time has not permitted the adoption of this plan in more than a small part of the budget for 1907; be it, therefore

Resolved, That it is the opinion of the board of estimate and apportionment that the budget of The City of New York for the year 1908 should contain, whenever possible, a specific item for each class of expenditure to be made thereunder in order that through said budget adequate control may be had over the administrative and other cost of the various city and other departments, especially to prevent increases in salary expenditures by department heads within the budget allowances of said departments for the year but in excess of the annual rates of salary allowances upon which the budget was granted, and for the purpose of carrying out this plan the comptroller is hereby requested to direct the preparation, by the bureau of municipal investigation and statistics, of the finance department, and submit to the board of estimate and apportionment, not later than May 1, 1907, an outline plan for the departmental estimate for each one of the departments and county and other offices of the city to which allowances will be made in the budget for 1908, said plan to provide for compliance with the purpose of this resolution in the said Budget of 1908.

Which was adopted by the following vote:

Affirmative—The mayor, the comptroller, the president of the board of aldermen and the presidents of the boroughs of Manhattan, Brooklyn and Queens—14.

October 30, 1906

TITLES FOR BUDGET APPROPRIATION, DEPARTMENT OF HEALTH: (A) UNSEGREGATED BUDGET 1906, (11). (B) SEGREGATION OF PAYROLL PROPOSED BY THE BUREAU FOR 1907, (34). (C) VOTED BY THE BOARD OF ESTIMATE AND APPORTIONMENT FOR THE BUDGET OF 1907, (29). (D) ADOPTED BY THE CONFERENCE COMMITTEE OF THE FINANCE DEPARTMENT AND THE BUREAU, AND PRESCRIBED BY THE COMPTROLLER FOR THE BUDGET OF 1908 (123).

Within the limits of the functions included in titles given, the board of health may spend its appropriation as it wishes. But neither the board of health nor any other department or city official has authority to divert funds voted under one title to purposes included in another title. If a function must be crippled, or if a surplus is to be transferred, the board of estimate and board of aldermen must assume responsibility.

(A) UNSEGREGATED BUDGET, 1906  
(11 titles)

Salaries, Board of Health and Executive Officers  
Salaries of Officers, Clerks, Inspectors and Other Employees  
Salaries, Medical School Inspection  
Salaries, Bacteriological Laboratory  
Removal of Night Soil, Offal and Dead Animals  
Sanitary Police  
Supplies and Contingencies  
Disinfection  
Hospital Fund  
Support of Ambulance Service  
For Abatement of Nuisances

(B) SEGREGATION OF PAY-ROLL PROPOSED BY THE BUREAU  
FOR 1907  
(34 titles)

Commissioner's Office  
Secretary of Board of Health, Office  
General Medical Officer, Office  
Chief Clerk's Office  
Sanitary Superintendent's Office  
Superintendent of Hospitals  
Corporation Counsel's Office  
Registrar of Records  
Communicable Diseases, Office  
Assistant Chief Clerks  
Executive Division: Office Force  
Division of Inspections: Office Force  
" " Inspection Force  
Division of Contagious Diseases: Office Force  
" " " Medical Inspection  
" " " Relief Work  
" " " Preventive Work  
Division of Communicable Diseases: Office Force  
" " " Inspection Force  
" " " Nurses  
Assistant Registrars of Records  
Research Laboratory  
Vaccine "  
Chemical "  
Diagnosis "

Willard Parker and Reception  
Trachoma  
Kingston Avenue  
Riverside  
Tuberculosis Clinic  
Otisville  
Building Fund  
Re-indexing Records  
Medical Commissions

(C) VOTED BY THE BOARD OF ESTIMATE AND APPORTIONMENT  
FOR THE BUDGET OF 1907

(29 titles)

1. Executive Office
2. Assistant Chief Clerks
3. " Executive Division
4. " Sanitary Police
5. " Inspections
6. " Contagious Diseases, Office
7. " " " Medical Inspection
8. " " " Relief Work
9. " Preventive Work
10. Communicable Diseases
11. Assistant Registrars of Records
12. Research Laboratory
13. Vaccine Laboratory
14. Diagnosis Laboratory
15. Chemical Laboratory
16. William Parker and Reception Hospitals
17. Trachoma Hospital
18. Riverside Hospital
19. Tuberculosis Clinic
20. Kingston Avenue Hospital
21. Otisville Sanatorium
22. Supplies and Contingencies
23. Removal of Night Soil
24. Disinfection
25. Hospital Fund
26. Ambulance Service
27. Laboratory Fund (New)
28. Abatement of Nuisances
29. Tuberculosis Fund (New)

(D) ADOPTED BY THE CONFERENCE COMMITTEE OF THE FINANCE  
DEPARTMENT AND THE BUREAU, AND PRESCRIBED BY  
THE COMPTROLLER FOR THE BUDGET OF 1908

(123 titles)

## I. GENERAL ADMINISTRATION

## SALARIES

Office of the commissioner . . . . .	\$	
" " " secretary . . . . .	\$	
" " " chief clerk . . . . .	\$	
" " " registrar of records . . . . .	\$	
" " " general medical officer . . . . .	\$	
" " " sanitary supt. . . . .	\$	
" " " supt. of hospitals . . . . .	\$	
" " " law clerk . . . . .	\$	
" " " inspector of construction and repairs . . . . .	\$	\$
Maintenance (i. e., renewals; renewal supplies and repairs) . . . . .	\$	
Equipment (i. e., furniture, vehicles, implements, etc.) . . . . .	\$	
Supplies (i. e., consumable supplies, such as medicines; foods; parts of animals used for laboratory and other medical purposes; forage, etc.) . . . . .	\$	
Contingencies . . . . .	\$	
Telephone (one appropriation for each borough) . . . . .	\$	

RENTS (These are provided for by the sinking fund commissioners but should be shown as separate items in this budget) . . . . .

## II. BOROUGH ADMINISTRATION OF SANITATION AND PREVENTION OF CONTAGIOUS DISEASES

## Manhattan

## SALARIES

Office of assistant sanitary superintendent . . . . .	\$	
" " " assistant chief clerk . . . . .	\$	
" " " assistant registrar of records . . . . .	\$	\$
Division of inspections		
(a) Sanitary inspection, i. e., special inspection, district inspection, mercantile house inspection, lodging-house inspection . . . . .	\$	
(b) Food, fruit, meat and fish inspection . . . . .	\$	
(c) Milk inspection—(all Boroughs) . . . . .	\$	
Division of contagious diseases . . . . .	\$	
Division of school medical inspection . . . . .	\$	
Sanitary police . . . . .	\$	\$
Maintenance . . . . .	\$	\$
Equipment . . . . .	\$	
Supplies . . . . .	\$	
Contingencies . . . . .	\$	\$

## II. BOROUGH ADMINISTRATION OF SANITATION AND PREVENTION OF CONTAGIOUS DISEASES—continued

## The Bronx

## SALARIES

Office of assistant sanitary superintendent . . . . .	\$	
" " " assistant chief clerk . . . . .	\$	
" " " assistant registrar of records . . . . .	\$	\$
Division of inspections		
(a) Sanitary inspection, i. e., special inspection, district inspection, mercantile house inspection, lodging-house inspection . . . . .	\$	
(b) Food, fruit, meat and fish inspection . . . . .	\$	
Division of contagious diseases . . . . .	\$	
Division of school medical inspection . . . . .	\$	\$
Sanitary police . . . . .	\$	\$
Maintenance . . . . .	\$	
Equipment . . . . .	\$	
Supplies . . . . .	\$	
Contingencies . . . . .	\$	\$

## Brooklyn

## SALARIES

Office of assistant sanitary superintendent . . . . .	\$	
" " " chief clerk . . . . .	\$	
" " " registrar of records . . . . .	\$	\$
Division of inspections		
(a) Sanitary inspection, i. e., special inspection, district inspection, mercantile house inspection, lodging-house inspection . . . . .	\$	
(b) Food, fruit, meat and fish inspection . . . . .	\$	
Division of contagious diseases . . . . .	\$	
Division of school medical inspection . . . . .	\$	\$
Sanitary police . . . . .	\$	\$
Maintenance . . . . .	\$	
Equipment . . . . .	\$	
Supplies . . . . .	\$	
Contingencies . . . . .	\$	\$

## II BOROUGH ADMINISTRATION OF SANITATION AND PREVENTION OF CONTAGIOUS DISEASES—Continued

### Queens

#### SALARIES

Office of assistant sanitary superintendent . . .	\$		
" " " chief clerk . . . . .	\$		
" " " registrar of records . . .	\$		

#### Division of inspections

(a) Sanitary inspection, i. e., special inspection, district inspection, mercantile house inspection, lodging-house inspection . . . . .	\$		
--	----	--	--

(b) Food, fruit, meat and fish inspection . . . . .	\$		
---	----	--	--

Division of contagious diseases . . . . .	\$		
---	----	--	--

Division of school medical inspection . . . . .	\$	\$	
---	----	----	--

Sanitary police . . . . .		\$	
---------------------------	--	----	--

Maintenance . . . . .	\$		
-----------------------	----	--	--

Equipment . . . . .	\$		
---------------------	----	--	--

Supplies . . . . .	\$		
--------------------	----	--	--

Contingencies . . . . .	\$	\$	\$
-------------------------	----	----	----

### Richmond

#### SALARIES

Office of assistant sanitary superintendent . . .	\$		
" " " chief clerk . . . . .	\$		
" " " registrar of records . . . . .	\$		

#### Division of inspections

(a) Sanitary inspection, i. e., special inspection, district inspection, mercantile house inspection, lodging-house inspection . . . . .	\$		
--	----	--	--

(b) Food, fruit, meat and fish inspection . . . . .	\$		
---	----	--	--

Division of contagious diseases . . . . .	\$		
---	----	--	--

Division of school medical inspection . . . . .	\$	\$	
---	----	----	--

Sanitary police . . . . .		\$	
---------------------------	--	----	--

Maintenance . . . . .	\$		
-----------------------	----	--	--

Equipment . . . . .	\$		
---------------------	----	--	--

Supplies . . . . .	\$		
--------------------	----	--	--

Contingencies . . . . .		\$	\$
-------------------------	--	----	----

## III. DIVISION OF COMMUNICABLE DISEASES

### SALARIES

District inspection, medical inspection, tuberculosis nurses

Manhattan . . . . .	\$		
The Bronx . . . . .	\$		
Brooklyn . . . . .	\$		
Queens . . . . .	\$		
Richmond . . . . .	\$		

Clinics for treatment of communicable pulmonary diseases, attending physicians and nurses . . . . .

(One appropriation for each borough)

Diagnosis laboratory; bacteriologists; collection, preparation and examination of specimens—Manhattan only . . . . .	\$	\$	
--	----	----	--

Maintenance . . . . .	\$		
-----------------------	----	--	--

Equipment . . . . .	\$		
---------------------	----	--	--

Supplies . . . . .	\$		
--------------------	----	--	--

Contingencies . . . . .	\$	\$	\$
-------------------------	----	----	----

## IV. LABORATORIES

Research laboratory . . . . .	\$		
-------------------------------	----	--	--

Vaccine " . . . . .	\$		
---------------------	----	--	--

Chemical " . . . . .	\$		
----------------------	----	--	--

Drug " . . . . .	\$	\$	
------------------	----	----	--

Maintenance . . . . .	\$		
-----------------------	----	--	--

Equipment . . . . .	\$		
---------------------	----	--	--

Supplies . . . . .	\$		
--------------------	----	--	--

Contingencies . . . . .	\$	\$	\$
-------------------------	----	----	----

(Separate expense appropriations for each laboratory)

## V. HOSPITALS

### RIVERSIDE

Salaries . . . . .		\$	
--------------------	--	----	--

Maintenance . . . . .	\$		
-----------------------	----	--	--

Equipment . . . . .	\$		
---------------------	----	--	--

Supplies . . . . .	\$		
--------------------	----	--	--

Contingencies . . . . .	\$	\$	\$
-------------------------	----	----	----

## V. HOSPITALS—continued

## WILLARD PARKER AND RECEPTION

Salaries . . . . .		\$	
Maintenance . . . . .	\$		
Equipment . . . . .	\$		
Supplies . . . . .	\$		
Contingencies . . . . .	\$	\$	\$

## KINGSTON AVENUE

Salaries . . . . .		\$	
Maintenance . . . . .	\$		
Equipment . . . . .	\$		
Supplies . . . . .	\$		
Contingencies . . . . .	\$	\$	\$

## TRACHOMA

Salaries . . . . .		\$	
Maintenance . . . . .	\$		
Equipment . . . . .	\$		
Supplies . . . . .	\$		
Contingencies . . . . .	\$	\$	\$

## OTISVILLE

Salaries . . . . .		\$	
Maintenance . . . . .	\$		
Equipment . . . . .	\$		
Supplies . . . . .	\$		
Contingencies . . . . .	\$	\$	\$

## VI. MISCELLANEOUS

(a) Removal of night soil . . . . .	\$		
(b) Support of private ambulance service . . .	\$		
(c) Abatement of nuisances . . . . .	\$	\$	\$

(a) One appropriation for each borough

(b) One appropriation for Brooklyn and an appropriation for Queens

(c) One appropriation for each borough

## Notes in Re Department of Health Budget for 1908

SCHEDULE—Showing specifically the expenditures which will classify under the general groupings respectively of "Maintenance," "Equipment," "Supplies," and "Contingencies," to wit:

## MAINTENANCE:

Automobile Storage; Horseshoeing and Clipping; Livery; Care and Maintenance—Department Buildings; Repairs—Department Buildings; Repairs and Improvements to Grounds and Buildings only.

## EQUIPMENT:

Furniture and Repairs to Furniture; Automobile Purchase and Repairs; Carriage Purchase and Repairs; Harness Purchase and Repairs; Horse Purchase and Hire; Stable Fixtures and Repairs; Disinfecting Fixtures and Repairs; Instruments and Apparatus; Purchase of Cows.

## SUPPLIES:

Books, Periodicals, etc.; Miscellaneous Supplies; Automobile Fuel and Supplies; Horse Feed; Stable Supplies; Standard Samples; Peppermint Oil and Uanine; Disinfectants; Disinfectors' Supplies; Foods; Drugs and Chemicals; Drug-gists' Sundries; Fuel; Light; Clothing, Boots and Shoes; Dry Goods; Bedding; Notions; Crochery and House Furnishings; Freight and Express; Farmers' Supplies; Engineers' Supplies; Carpenters', Gardeners', and Painters' Supplies; Ice; Blood; Hire of Calves; Milk for Vaccine Virus; Needles, Boxes, etc.; Care and Maintenance and Medical Attendance of Horses; Purchase of small Animals; Feed for small Animals; Boxes, Vials, and Syringes.

## CONTINGENCIES:

Traveling Expenses; Carfares, Expressage, etc.; Automobile Hire; Postage, etc. Traveling Expenses—Milk Inspectors; Disinfectors' Carfares.

*Exhibit 4*

Tabular forms devised by the Bureau of Municipal Research and adopted by the department of health for use in the latter's annual report to show the work done and results obtained in the various lines of activity maintained by the department; with notes as to methods, purposes and interpretation

## INDEX

## DIVISION OF INSPECTIONS

## GENERAL, SANITARY INSPECTION

- Table 1 Nature of Complaints and Action Taken, 1906
- Table 2 Complaints Disposed of within 30 and 60 Days, 1906
- Table 3 Complaints Pending Dec. 31, 1906, and When Received
- Table 4 Premises Ordered Vacated, 1906

## MILK INSPECTION

- Table 5 Comparative Summary of Infant Death Rate, Bacterial Content of Milk Samples, and City Inspection, 1902-1906
- Table 6 Deaths and Death Rate of Children under 1 Year of Age from Diarrheal Diseases during the months of June, July, August, and September, 1902-1906
- Table 7 Bacterial Content of Milk Samples, 1902-1906
- Table 8 Milk Inspection within New York City, 1906
- Table 9 Creamery Register, 1906
- Table 10 Creamery Scores, All Creameries Registered, 1906
- Table 11 Creamery Scores, Gain during 1906
- Table 12 Dairy Register, 1906
- Table 13 Dairy Scores, All Dairies Registered, 1906
- Table 14 Dairy Scores, Gain during 1906
- Table 15 Infectious Diseases Investigated, and Source Found in the Milk Supply 1902-1906

## MEAT INSPECTION

- Table 16 Inspection and Condemnation of Meat, 1905-1906
- Table 17 Pounds of Meat Condemned, 1906

## DIVISION OF INSPECTIONS—Continued

## INSPECTION OF FRUIT, FISH, AND OTHER FOODS

- Table 18 Inspection and Condemnation of Fruit, Fish, and Other Foods, 1905-1906
- Table 19 Pounds of Fruit, Fish, and Other Foods Condemned, 1906
- Table 20 Summary of Food, Samples Obtained, and Results of Analyses, 1906

## INSPECTION OF MERCANTILE ESTABLISHMENTS

- Table 21 Employment Certificates, 1906
- Table 22 Inspection of Mercantile Establishments, 1906
- Table 23 Summary of Inspection of Mercantile Establishments, 1902-1906

## LODGING HOUSE INSPECTION

- Table 24 Lodging House Inspections, 1905-1906

## SHORE INSPECTION

- Table 25 Shore Inspection, 1905-1906

## COMPLAINTS, NOTICES, AND CIVIL AND CRIMINAL ACTIONS

- Table 26 Complaints and Notices: Division of Inspections, 1906
- Table 27 Violations Forwarded to the Assistant Corporation Counsel for Civil Action, 1906
- Table 28 Civil Actions Brought by the Assistant Corporation Counsel, 1906
- Table 29 Criminal Actions for Violation of Sanitary Code, Charter, Statutes, and Ordinances, 1906
- Table 30 Criminal Actions in Magistrates' Courts, 1906
- Table 31 Criminal Actions in Court of Special Sessions, 1906

## DIVISION OF CONTAGIOUS DISEASES

## DISTRICT MEDICAL INSPECTION

- Table 32 Prevalence of Contagious Diseases, 1902-1906
- Table 33 Contagious Diseases: District Medical Inspection, 1906
- Table 34 Contagious Diseases: District Nurses' Visits, 1906

## MEDICAL INSPECTION OF SCHOOL CHILDREN

- Table 35 Prevalence of Contagious Diseases in School Children, 1902-1906
- Table 36 Contagious Diseases Found in Schools by Inspectors and Nurses, 1906
- Table 37 Medical Inspection of School Children for Contagious Diseases, 1906
- Table 38 Prevalence of Communicable Eye and Skin Diseases in Schools in which there are Nurses, and Proportion of Exclusions therefor, 1902-1906
- Table 39 Examination and Treatment of School Children for Non-contagious Physical Defects, 1906
- Table 40 Medical Examination of School Children: Non-contagious Physical Defects Found and Treated, 1906
- Table 41 Promotions among Children Treated and not Treated for Adenoids, 1906
- Table 42 Nationality of School Children Found Defective, Needing Treatment, 1906

## SUMMER CORPS

- Table 43 Summer Corps, 1906
- Table 44 Summer Corps: Summary, 1902-1906
- Table 45 Methods of Feeding of Children Registered by Summer Corps, 1906
- Table 46 Methods of Feeding of Children Dying from Diarrheal Diseases and Investigated by Summer Corps, 1906

## VACCINATION

- Table 47 Vaccinations in Schools, 1906
- Table 48 Total Vaccinations by Department of Health, 1906
- Table 49 Vaccinations by Department of Health, 1902-1906

## DISINFECTION

- Table 50 Disinfection of Premises, 1906
- Table 51 Goods Disinfected or Destroyed, 1906

## INSPECTION OF ANIMALS

- Table 52 Animal Inspection, 1906

## DEPARTMENT STABLES

- Table 53 Department Stables, 1906

## DIVISION OF COMMUNICABLE DISEASES

- Table 54 Tuberculosis: General Figures, 1897-1906  
 Table 55 Deaths from Pulmonary Tuberculosis and Tubercular Meningitis, 0-15 years, 1897-1906  
 Table 56 Tuberculosis Register: Living Cases, 1906  
 Table 57 Summary of District Inspection of Tuberculosis, and of Treatment by the Department Clinics, 1906  
 Table 58 Tuberculosis: District Inspection, 1906  
 Table 59 Tuberculosis Clinics, 1906  
 Table 60 Diphtheria: General Figures, 1897-1906  
 Table 61 Diphtheria: Injection, Intubation, and Immunization, 1906  
 Table 62 Typhoid and Cerebro-Spinal Meningitis: General Figures, 1897-1906  
 Table 63 Typhoid Fever: General Figures and Inspection, 1906  
 Table 64 Cerebro-Spinal Meningitis: General Figures and Inspection, 1906  
 Table 65 Summary of Inspections, Visits, etc., Division of Communicable Diseases, 1905-1906  
 Table 66 Diagnosis Laboratory: Specimens Examined, and Results of Examination, 1906  
 Table 67 Diagnosis Laboratory: Specimens Submitted for Examination, 1906

## HOSPITALS

- Table 68 Hospital Treatment of Contagious Diseases: Cases Treated, and Percentage of Total Cases Reported, 1902-1906  
 Table 69 All Department of Health Hospitals: Patients during 1906  
 Table 70 Reception Hospital: Patients during 1906  
 Table 71 Willard Parker Hospital: Patients during 1906  
 Table 72 Riverside Hospital: Patients during 1906  
 Table 73 Kingston Avenue Hospital: Patients during 1906  
 Table 74 Otisville Sanatorium: Patients during 1906  
 Table 75 Reception Hospital: Service Rendered, 1906  
 Table 76 Willard Parker Hospital: Service Rendered, 1906  
 Table 77 Riverside Hospital: Service Rendered, 1906  
 Table 78 Kingston Avenue Hospital: Service Rendered, 1906

## HOSPITALS—Continued

- Table 79 Otisville Sanatorium: Service Rendered, 1906  
 Table 80 Reception Hospital: Case Fatality, 1906  
 Table 81 Willard Parker Hospital: Case Fatality, 1906  
 Table 82 Riverside Hospital: Case Fatality, 1906  
 Table 83 Kingston Avenue Hospital: Case Fatality, 1906  
 Table 84 Cases of Infection within Hospitals, 1906  
 Table 85 Otisville Sanatorium: Patients Treated, and Condition when Discharged, 1906  
 Table 86 Otisville Sanatorium: Duration of Patients' Stay, 1906  
 Table 87 Otisville Sanatorium: Places to which Patients Discharged, 1906  
 Table 88 Trachoma Hospital and Dispensaries: Number and Percentage of Apparent Cures, 1902-1906  
 Table 89 Trachoma Hospital and Dispensaries: Special Annual Investigation  
 Table 90 Trachoma Hospital and Dispensaries: Treatment and Disposition of Cases, 1906  
 Table 91 Trachoma Hospital and Dispensaries: Examinations, Diagnoses, and Treatments, 1906

## LABORATORIES

## RESEARCH LABORATORY

- Table 92 Production of Antitoxic Serums and Diagnostic Toxins, 1905-1906  
 Table 93 Bacteriological Examination of Specimens, 1905-1906  
 Table 94 Pasteur Treatment, 1905-1906

## CHEMICAL LABORATORY

- Table 95 Specimens Submitted and Analyzed, 1905-1906  
 Table 96 Results of Analyses, 1906  
 Table 97 Number of Half Days of Attendance at Court, 1905-1906

## VACCINE LABORATORY

- Table 98 Virus Produced, Tested, and Issued, 1905-1906

## REMOVAL OF DEAD ANIMALS, OFFAL, AND NIGHT SOIL

- Table 99 Dead Animals, Offal, and Night Soil Ordered Removed, 1906

## GENERAL SANITARY INSPECTION

Object	The promotion of public health by the maintenance of general sanitary conditions.
Activities	<p>(a) Investigation by inspectors and sanitary police—</p> <p>(1) Of all citizens' complaints of unsanitary conditions.</p> <p>(2) To discover other unsanitary conditions not complained of by citizens.</p> <p>(b) Preventive and remedial measures for removing, in the manner prescribed by law, the unsanitary conditions found illegally existing.</p> <p>The connection of general sanitary inspection with the public health, while entirely beyond question, is so ill-defined that seldom can measurable results relative to the public health be shown to follow directly from the work done. It is, however, to be admitted on general principles that general sanitary inspection is necessary to render a city a healthful and decent place to live in. This assumption made, specific judgment may be passed as to the kinds of unsanitary conditions dealt with, the relative amount of effort spent on them (Table 1), and the promptness of action (Tables 2-3).</p>
Relation of Activities to Objects	

Table 1

Table 1 presents in classified form the complaints, coming under general sanitary inspection, which are received from citizens or filed by inspectors. The number of complaints given in the first column, including both those pending January 1 and those received and filed during the year, is exactly balanced by the five following columns. The table will show the nature of the complaints on which the bulk of the work in general sanitary inspection is required and the extent to which repeated inspection has to be resorted to in order to secure enforcement.

Table 1  
GENERAL SANITARY INSPECTION: NATURE OF COMPLAINTS AND ACTION TAKEN, 1906  
NEW YORK—(Identical forms for New York and each of five boroughs)

Nature of complaints								
	Number of items*	Duplicates	No cause for action †	Referred to other depts.	Returned for notices	Pending Dec. 31, 1906	Inspectors	Sanitary police
Alleys								
Areas								
Sheds								
Yards								
Animals kept without permit								
Apartments need cleaning or ventilating								
Ceilings or walls need cleaning, whitewashing, or repainting								
Cellars need cleaning, cementing, or draining								
Cellars inhabited contrary to law								
Cesspools need cleaning or repairing								
Chimneys need cleaning or repairing								
Excavations or vacant lots need cleaning, draining, or repainting								
Floors need cleaning or repairing								
Garbage or ash receptacles need to be provided, removed, or cleaned								
Gas mains or pipes need repairing								
Halls or stairways need cleaning or repairing								
Ice-boxes need cleaning or draining								
Lighting needed in dark halls or rooms								
Offensive trades								
Plumbing needs cleaning, repairing, trapping, or removal of obstructions								
Privies need cleaning, disinfecting, or repairing								
Roofs or roof drains need cleaning or repairing								
Smoke nuisance								
Stables should be cleaned, repaired, drained, or removed								
Water closet apartments need cleaning or repairing								
Water tanks or cisterns need cleaning or repairing								
Total								

\* By both citizens and inspectors † Either no cause for complaint or cause of complaint removed without issuance of notice

Tables 2 and 3

Promptness in investigating complaints and in taking whatever action is necessary is an important indication of the efficiency of an inspection force. While the promptness of inspection can be judged with exactness only by a continual examination of the daily or weekly office records, Tables 2 and 3 afford a sufficiently accurate basis on which to judge the work of the year as a whole.

Table 4

Table 4 is in the same form as the corresponding table in the present annual report.

Table 2

GENERAL SANITARY INSPECTION: COMPLAINTS DISPOSED OF  
WITHIN 30 AND 60 DAYS, 1906

	Complaints and ensuing actions disposed of* in 1906	Disposed of* within 30 days		Disposed of* within 60 days		Not disposed of* within 60 days	
		No.	%	No.	%	No.	%
New York .....							
Manhattan .....							
Bronx .....							
Brooklyn .....							
Queens .....							
Richmond .....							

\*In this table, the complaint and ensuing notice or legal action (if any) are all counted as parts of one operation. "Complaints disposed of," therefore, in this table includes (1) citizens' complaints returned negative (no cause for action; the complaint being without cause, or the cause being removed without issuance of notice); (2) all notices complied with, no matter whether originating with complaints of citizens or inspectors, and no matter whether before or after legal action. The periods 30 and 60 days are counted from the date of first receiving the complaint to the last date of its return as negative, or removal of cause of complaint (notices complied with).

Table 3

GENERAL SANITARY INSPECTION: COMPLAINTS PENDING  
DEC. 31, 1906, AND WHEN RECEIVED

	New York		Manhattan		Bronx		Brooklyn		Queens		Richmond	
	No.	% of total	No.	% of total	No.	% of total	No.	% of total	No.	% of total	No.	% of total
Complaints and ensuing actions* pending.....	100		100		100		100		100		100	
Complaints first received in												
December, 1906.....												
November, 1906.....												
October, 1906.....												
September, 1906.....												
August, 1906.....												
July, 1906.....												
June, 1906.....												
May, 1906.....												
April, 1906.....												
March, 1906.....												
February, 1906.....												
January, 1906.....												
Total 1906.....												
1905.....												
1904.....												

\*In this table, the complaint and ensuing notice or legal action (if any) are all counted as parts of one operation, which may be pending at any one of its stages: see note under Table 2

Table 4

PREMISES ORDERED VACATED,\* 1906

For city and each of five boroughs

Number	Date	Location	Cause	Result

\*Sections 1176 and 1299 of Chapter 466, Laws of 1901

## MILK INSPECTION

Object	The promotion of the public health as affected by the milk supply.
	(a) Within the city:
Activities	Inspection of milk in stores, on wagons, and to some extent at receiving stations, to see that it is unadulterated, sweet, and not above 50° Fahr. in temperature; and inspection of stores and wagons to see that sanitary conditions are maintained where milk is sold.
	(b) Chiefly outside the city:
	Inspection of creameries and dairies supplying milk to the city, to secure sanitary conditions.
	(c) Either inside or outside the city:
	Investigation of cases of infectious diseases suspected to have resulted from the contamination of the milk supply.
Relation of Activities to Object	It is agreed that there is an intimate connection between the deaths from diarrheal diseases of children under one year of age and the condition of the milk supply. To what extent other factors—such as the work of the summer corps, pasteurization, variations in the ice supply, in the temperature, and humidity—enter in to modify the exactness of this relation is of course open to debate; but it is safe to say that the relation is sufficiently close so that any thoroughgoing measure adopted by the department of health to protect the milk supply would be effective to a greater or less degree in reducing the infant death rate from diarrheal diseases (Tables 5-6).

To reinforce this evidence, systematic bacteriological tests should be made. An analysis of several thousand samples each year, so taken as to distinguish pasteurized from unpasteurized milk, and so distributed as to be fairly typical of the total milk supply, would furnish a fair indication of the relative cleanliness of the milk supply from year to year (Tables 5 and 7). A study of results will enable the department to decide whether its "warning" line shall be drawn at 1,000,000 or 500,000, etc.

Further evidence to the same point would be afforded by the reports showing the conditions in creameries and dairies (Tables 9-14). See Exhibit 9.

In addition, there should be statements showing how strong the presumption is that a large proportion of the adulterated milk is discovered. For this purpose, statements for a single year convey little meaning. If, however, a statement covering several years shows, relative to the frequency of inspection (assuming the same efficiency throughout) an increase or decrease in the proportion of bad conditions to good, there is a basis for inference as to whether conditions generally are becoming better or worse (Table 5).

The tracing of infectious diseases to their possible origin in the milk supply is virtually a kind of detective work. It varies so from time to time that, while its results should be reported, they indicate little as to department vigilance (Table 15).

Table 5

Table 5 is a summary for five years of facts given in more detail for the current year in Tables 6-8. It is intended to exhibit whatever correspondence there may be between the infant death rate and the cleanliness of milk supply (which reflects the work of creamery and dairy inspection) and the results of city inspection. With a diminishing percentage of samples containing over 1,000,000 bacteria per cubic centimeter, a fall in the death rate might be expected.

In the other columns, assuming the same degree of efficiency, if the frequency of inspection remains the same over several years, while the percentages of inspections finding adulteration or milk above 50° increase, the inference would be that conditions are growing worse, and that more inspection was needed: on the other hand, under the same conditions, a falling off in the percentage of adulterations found would argue an improvement.

Table 6

The relation between the deaths from diarrheal diseases of children under one year of age and the condition of the milk supply is seen most clearly in the summer months, when the milk supply is at its worst and when children have in general least vital resistance to disease.

Table 5

COMPARATIVE SUMMARY OF INFANT DEATH RATE, CITY INSPECTION  
AND BACTERIAL CONTENT, TEMPERATURE AND ADUL-  
TERATION OF MILK SAMPLES, 1902-1906

	Infant death rate*	Bacterial content†	Inspections‡	Temperature§	Adulteration¶
	Deaths from diarrheal diseases, June to September, of children under 1 per 1,000 births during 12 mos.‡	Percentage of milk samples containing over 1,000,000 bacteria per cubic centimeter	Average number inspections per permit per year	Percentage of inspections finding milk above 50°	Percentage of inspections finding adulterations
New York					
1902 . . . .					
1903 . . . .					
1904 . . . .					
1905 . . . .					
1906 . . . .					
Each borough					
1902 . . . .					
1903 . . . .					
1904 . . . .					
1905 . . . .					
1906 . . . .					

\* See Table 6

† See Table 7

‡ See Table 8

§ The 12 months ending Sept. 30

Table 6

DEATHS AND DEATH RATE OF CHILDREN UNDER 1 YEAR OF AGE FROM  
DIARRHEAL DISEASES DURING THE MONTHS OF JUNE, JULY, AUGUST  
AND SEPTEMBER, 1902-1906

	June	July	Aug.	Sept.	Total 4 months	Deaths, 4 mos., per 1,000 births during 12 mos.*
New York						
1902 . . . . .						
1903 . . . . .						
1904 . . . . .						
1905 . . . . .						
1906 . . . . .						
Each borough						
1902 . . . . .						
1903 . . . . .						
1904 . . . . .						
1905 . . . . .						
1906 . . . . .						

\* The 12 months ending Sept. 30

Table 7

The bacterial content of milk is not suggested as a standard which can be enforced as to all milk sold in New York City. It is proposed, however, as an important index by which the general condition of the milk supply can be judged from year to year. It can also, by the proper arrangement of the methods of taking the samples, be made a basis for comparing pasteurized and non-pasteurized milk, milk pasteurized in the city and in the country, and non-pasteurized milk at its different stages, i. e., at receiving stations, at stores, and on wagons.

Table 7

## BACTERIAL CONTENT OF MILK SAMPLES, 1902-1906

	1902	1903	1904	1905	1906
Average daily milk supply (estimated) in gallons .					
Samples taken for bacterial examination . . . . .					
January . . . . .					
February . . . . .					
March . . . . .					
April . . . . .					
May . . . . .					
June . . . . .					
July . . . . .					
August . . . . .					
September . . . . .					
October . . . . .					
November . . . . .					
December . . . . .					

Year	NUMBER OF SAMPLES					Spoiled	Total
	Whose bacterial content per cubic centimeter was found						
	Under 100,000	Between 100,000 and 250,000	Between 250,000 and 500,000	Between 500,000 and 1,000,000	Over 1,000,000		
1902							
1903							
1904							
1905							
1906							

PERCENTAGE OF SAMPLES							
Year	Whose bacterial content per cubic centimeter was found					Spoiled	Total
	Under 100,000	Between 100,000 and 250,000	Between 250,000 and 500,000	Between 500,000 and 1,000,000	Over 1,000,000		
1902							100
1903							100
1904							100
1905							100
1906							100

Table 8

The bulk of city inspection is of milk in the possession of persons having permits to sell either in stores or on wagons. The field, therefore, which city inspection has to cover is approximately indicated by the average number of permits in force; and the extent to which the field is covered is indicated by the average number of inspections per permit per year.

The distinction between store and wagon is necessary because conditions vary so widely between the two classes of permits. One man may hold a large number of wagon permits; whereas one man is not as likely to hold many store permits. This reason alone would account for a considerable difference in frequency of inspection: if a dealer maintains good conditions on one of his wagons, there is some presumption that he will on the rest; but in stores there is no such presumption. If it appeared either from the observation of the supervisory inspector or from Table 5 that more inspection was needed, the question would arise whether the added inspection should be of stores or of wagons. This would be answered by the records showing in each the proportion of inspections finding adulterations.

Table 8

## MILK INSPECTION WITHIN NEW YORK CITY, 1906

	New York		Each borough	
	Stores	Wagons	Stores	Wagons
<b>FIELD</b>				
Permits issued during 1906 . . . . .				
Permits revoked during 1906 . . . . .				
For discontinuance of selling . . . . .				
For violation of law . . . . .				
Average permits in force in 1906* . . . . .				
<b>INSPECTION</b>				
Regular inspections . . . . .				
Inspections at receiving stations . . . . .				
Total . . . . .				
<b>Average inspections per permit per year</b>				
Specimens examined† . . . . .				
Samples taken . . . . .				
<b>CONDITIONS FOUND</b>				
Inspections finding milk above 50° . . . . .				
% of such discoveries to total inspections . . . . .				
Inspections finding adulteration‡ . . . . .				
Warning given§ . . . . .				
Prosecuted§ . . . . .				
% of adulterations found to inspections . . . . .				
Rooms connected contrary to sanitary code . . . . .				
Ice box badly drained . . . . .				
Ice box unclean . . . . .				
Store unclean . . . . .				
Utensils unclean . . . . .				
Milk not properly cooled . . . . .				
Infectious disease . . . . .				
Persons found selling without permit . . . . .				
<b>ACTION TAKEN</b>				
<b>DESTRUCTION OF MILK</b>				
<b>Lots of milk destroyed for being over 50°</b>				
Quarts so destroyed . . . . .				
Lots of milk destroyed for being sour . . . . .				
Quarts so destroyed . . . . .				
<b>Lots of milk destroyed for being otherwise adulterated</b>				
Quarts so destroyed . . . . .				
Total quarts destroyed . . . . .				
<b>NOTICES ISSUED¶</b>				
To drain and clean ice box . . . . .				
To clean store . . . . .				
<b>CRIMINAL ACTIONS BEGUN¶</b>				
For selling adulterated milk . . . . .				
For selling without permit . . . . .				
For interference with inspector . . . . .				
Total . . . . .				

\* Average in force on the first of each month

† Several specimens may be examined at a single inspection

‡ Samples taken and analyzed

§ The technical definition of adulteration is found in Section 53 of the Sanitary Code, the chief items being "containing less than 12 per centum of milk solids" and "containing less than 3 percentum of fats". In enforcement a distinction is made between samples whose milk solids are found between 12% and 11.4%: 12%-11.4% are made occasions for warning only, under 11.4% for prosecution

¶ For action upon notices, see Table 26

¶ See Table 29

Tables 9-11

The department of health has installed what is in effect a register of the creameries sending milk to New York City, together with a score record of their condition at the last inspection.

Table 9 gives the number of creameries enrolled, together with the number inspected, and the frequency of inspection.

Table 10 shows the number and percentage of creameries whose condition is classed at the beginning and at the end of the year as good (between 75% and 100%), fair (between 50% and 75%), and poor (under 50%). The year's work should bring about a higher percentage of those classed as good or fair. The average score of all creameries enrolled should also rise.

Table 11 is designed to show wherein the improvement consists. The department is in a position to report improvement during the year, of course, only in those creameries which it has inspected more than once. For these creameries, therefore, the gain is analyzed according to the subdivisions of the score card used.

Tables 12-14

Tables 12-14 are, for dairies, the same as 9-11 for creameries.

Table 9

## CREAMERY REGISTER, 1906

Enrolled Jan. 1, 1906 . . . . .	
New creameries scored during 1906 . . . . .	
Total . . . . .	
Creameries dropped during 1906 . . . . .	
" enrolled Dec. 31, 1906 . . . . .	
Total . . . . .	
Creameries inspected at least once . . . . .	
Percentage of total inspected at least once . . . . .	
Number of inspections . . . . .	
Average inspections per year per place inspected . . . . .	

Table 10

## CREAMERY SCORES: ALL CREAMERIES REGISTERED, 1906

Scores at last inspection	Number registered		Percentage of total	
	Jan. 1, 1906	Dec. 31, 1906	Jan. 1, 1906	Dec. 31, 1906
Between 75 and 100% . . . . .				
" 50 and 75% . . . . .				
Below 50% . . . . .				
Total . . . . .			100	100
Average score at last inspection, Jan. 1, 1906 . . . . .				
" " " " " Dec. 31, 1906 . . . . .				

Table 11

## CREAMERY SCORES: GAIN DURING 1906

Creameries inspected more than once in 1906 . . . . .								
	Perfect score		At first inspection		At last inspection		Gain	
	Single creamery	Aggregate	Aggregate	% of perfect score	Aggregate	% of perfect score	Aggregate	% of gain
Total . . . . .	100							
Location and surroundings . . . . .	8							
Rooms: arrangement and ventilation . . . . .	16							
Walls, ceilings, floors . . . . .	16							
Drains and drainage . . . . .	12							
Utensils and apparatus . . . . .	13							
Water or ice supply, tanks, etc. . . . .	22							
Methods of handling milk . . . . .	7							
Cleanliness of attendants . . . . .	6							

Table 12

## DAIRY REGISTER, 1906

Enrolled Jan. 1, 1906 . . . . .	
New dairies scored during 1906 . . . . .	
Total . . . . .	
Dairies dropped during 1906 . . . . .	
" enrolled Dec. 31, 1906 . . . . .	
Total . . . . .	
Dairies inspected at least once . . . . .	
Percentage of total inspected at least once . . . . .	
Number of inspections . . . . .	
Average inspections per year per place inspected . . . . .	

Table 13

## DAIRY SCORES: ALL DAIRIES REGISTERED, 1906

Scores at last inspection	Number registered		Percentage of total	
	Jan. 1, 1906	Dec. 31, 1906	Jan. 1, 1906	Dec. 31, 1906
Between 75 and 100% . . . . .				
" 50 and 75% . . . . .				
Below 50% . . . . .				
Total . . . . .			100	100
Average score at last inspection, Jan. 1, 1906 . . . . .				
" " " " " Dec. 31, 1906 . . . . .				

Table 14

## DAIRY SCORES: GAIN DURING 1906

	Perfect score		At first inspection		At last inspection		Gain	
	Single dairy	Aggregate	Aggregate	% of perfect score	Aggregate	% of perfect score	Aggregate	% of gain
Total . . . . .	100							
Condition of								
Stables . . . . .	40							
Cow yard . . . . .	3							
Cows . . . . .	21							
Milkers and milking . . . . .	13							
Utensils . . . . .	6							
Milk house . . . . .	7							
Water supply . . . . .	10							
	100							

Table 15

## INFECTIOUS DISEASES INVESTIGATED AND SOURCE FOUND IN THE MILK SUPPLY, 1902-1906

	1902	1903	1904	1905	1906
TYPHOID					
Suspected cases referred for investigation . . . . .					
Cases of infection traced to milk supply . . . . .					
SCARLET FEVER					
Suspected cases referred for investigation . . . . .					
Cases of infection traced to milk supply . . . . .					

## MEAT INSPECTION

## Object

To promote the public health by seeing that the meat slaughtered or sold in the city is fit for consumption as food.

## Activities

Inspection of butcher shops, stores, packing houses, ice-houses, stands\*, vessels\*, markets, railroad depots, stock yards, slaughter houses, commission houses, fat houses, and licensed venders;\* and condemnation of meat found to be unfit.

Relation of  
Activities  
to Object

The relation of meat inspection to the public health is not so definite that its adequacy can be measured in health terms. It cannot be stated, even approximately, to what extent the public health is improved by meat inspection. It is admitted on general principles, however, that inspection of the food supply is necessary. This assumption made, the question is one of covering the supply as thoroughly as possible.

Table 16

Table 16 shows the kinds of place inspected, the average frequency of inspection of each, together with the number of condemnations and pounds of meat condemned in each. The number of condemnations is given separately from the amount condemned, in order to indicate more accurately the amount of work involved. It would take more inspections, for example, to condemn a given amount of meat in butcher shops than in packing houses.

Conditions vary from year to year to such a degree that comparison with more than one preceding year would probably be of little value.

\* The number of establishments of the kinds indicated (\*) is so variable that the average number of inspections of each per year would mean little. For the rest, however, such a figure would afford a basis for comparing successive years.

Table 16  
INSPECTION AND CONDEMNATION OF MEAT, 1905-1906

	1906				1905	
	Average number during year †	Inspections	Average inspections per place during year	Condemnations	Pounds condemned	Average inspections per place during year
NEW YORK						
Butcher shops .....						
Stores .....						
Packing houses .....						
Ice houses .....						
Stands* .....						
Vessels* .....						
Markets .....						
R. R. depots .....						
Stock yards .....						
Slaughter houses .....						
Commission houses .....						
Fat houses .....						
Licensed venders* .....						
Each of five boroughs						
Butcher shops .....						
Stores .....						
Packing houses .....						
Ice houses .....						
Stands* .....						
Vessels* .....						
Markets .....						
R. R. depots .....						
Stock yards .....						
Slaughter houses .....						
Commission houses .....						
Fat houses .....						
Licensed venders* .....						

\* The number of establishments of the kinds indicated (\*) is so variable that the average number of inspections of each per year would mean little. For the rest, however, such a figure would afford a basis for comparing successive years

† Average of those under inspection on the first of each quarter



### INSPECTION OF FRUIT, FISH, AND OTHER FOODS

Object	To promote the public health by seeing that the fruit, vegetables, fish, and other foods (chiefly canned goods, confectionery, groceries, and eggs) that are sold are in fit condition to serve as food.
Activities	<p>(a) Inspection of commission houses, retail stores, licensed venders, vessels and wharves, railroad depots, stands, markets, ice houses, and push carts; and condemnation of foods found to be unfit.</p> <p>(b) Gathering of samples of confectionery, canned goods, etc., for analysis; and initiating action against dealers whose foods are found adulterated.</p> <p>(c) In connection with both (a) and (b), the sanitary inspection of the places where foods are sold or manufactured.</p>
Relation of Activities to Objects	The process of marketing perishable foods is so subject to fluctuations that no definite formulation can be made of the conditions under which the work is carried on. A commission house may be selling fruit one week and not the next; cargoes arrive irregularly; and the methods of handling are such that the number of inspections per place cannot be taken as a fair standard of judgment. All that is suggested for an annual report, therefore, is the statement of inspections, condemnations, and amount condemned in each kind of place.*

Table 18

In Table 18, as in Table 16, a distinction is made between condemnations and amount condemned, in order to show more accurately the amount of work involved.

\*See page 19

Table 18

### INSPECTION AND CONDEMNATION OF FRUIT, FISH AND OTHER FOODS, 1905-1906\*

	1906			1905		
	Inspection	Condemnation	Pounds condemned	Inspection	Condemnation	Pounds condemned
<b>NEW YORK</b>						
Commission houses .....						
Retail stores .....						
Licensed venders .....						
Vessels and wharves .....						
R. R. depots .....						
Stands .....						
Markets .....						
Ice houses .....						
Push carts .....						
Total .....						
<b>Each of five boroughs</b>						
Commission houses .....						
Retail stores .....						
Licensed venders .....						
Vessels and wharves .....						
R. R. depots .....						
Stands .....						
Markets .....						
Ice houses .....						
Push carts .....						
Total .....						

\*The process of marketing perishable foods is so subject to fluctuations that no more definite formulation can be made than that based on inspections

Table 19

Table 19 is simply a subdivision of column 3 of the preceding table, to show what kinds of food are condemned in the different places inspected.

Table 20

The specimens whose analyses are reported in Table 20 are used for the most part as the basis for legal action against the dealer from whom they were obtained. The approximate extent to which they are so used can be seen by comparing Table 20 with the criminal actions initiated by this branch of food inspection, as given in Table 28.

*Table 19*

**POUNDS OF FRUIT, FISH, AND OTHER FOODS CONDEMNED, 1966**

## SUMMARY OF FOOD SAMPLES OBTAINED AND RESULTS OF ANALYSES, 1906

Table 20

	Samples obtained and delivered to chemical laboratory						Found adulterated					
	New York	Man- hattan	Bronx	Brook- lyn	Queens	Rich- mond	New York	Man- hattan	Bronx	Brook- lyn	Queens	Rich- mond
Baking powder .....												
Canned fish .....												
Canned meat .....												
Canned vegetables .....												
Catsup and sauce .....												
Cocoa .....												
Coffee .....												
Condensed milk .....												
Confectionery .....												
Drugs .....												
Flavoring extracts .....												
Honey .....												
Jams, jellies, and preserved fruits.....												
Olive oil .....												
Prepared mustards .....												
Spices .....												
Soups .....												
Syrups .....												
Tea .....												
Vinegar .....												
Total .....												

## MERCANTILE ESTABLISHMENTS

To regulate certain conditions under which women and children may work in mercantile establishments. While there is an ultimate health object, it is too remote to be of service in measuring the results of service rendered.

Object

(a) The issuance of employment certificates to children between 14 and 16 years of age.

Activities

(b) The inspection of mercantile establishments to enforce the law relating to the employment of women and children therein.

Assuming efficiency of supervision to secure thorough inspection, successful inspection of mercantile establishments should result in few violations of law existing, and therefore few violations found. Since a large number of establishments may need inspecting only once or twice a year, while others may need almost constant watching, the extent to which this is done would appear only from the daily or weekly office records. The most significant facts that can be brought out in an annual report are perhaps the total number of mercantile establishments inspected at all during the year, the number in which violations of law were found, and the average frequency with which these latter were inspected during the year (Table 23).

Relation of  
Activities  
to Object

Table 21

## EMPLOYMENT CERTIFICATES, 1906

	New York	Manhattan	Bronx	Brooklyn	Queens	Richmond
Applications for employment certificates*.....						
Granted .....						
Refused .....						
By reason of insufficient education.....						
By reason of insufficient tuition.....						
By reason of insufficient evidence as to birth.....						
By reason of physical incapacity.....						
By reason of being under age.....						
Certificates in force January 1, 1906.....						
Certificates granted during 1906.....						
Certificates expiring during 1906.....						
Certificates in force December 31, 1906.....						
Duplicate certificates issued.....						

\*Children applying and found over age are considered as not having applied

Table 22

## INSPECTION OF MERCANTILE ESTABLISHMENTS,\* 1906

	New York	Manhattan	Bronx	Brooklyn	Queens	Richmond
<b>INSPECTION</b>						
Mercantile establishments inspected in 1906....						
Mercantile establishments in which violations of law were found.....						
Total inspections of mercantile establishments.....						
Inspections of mercantile establishments in which violations of law were found.....						
Average inspections per year per establishment where violations of law were found.....						
<b>VIOLATIONS</b>						
Violations of law found.....						
Children employed without certificates.....						
Male .....						
Female .....						
Basement occupied.....						
No seats for females.....						
No separate toilets for females.....						
No register kept.....						
Work after 7 P. M.....						
Work more than 9 hours a day.....						
Work more than 54 hours in a week.....						
Law not posted.....						

\* For complaints and notices, see Table 26

Table 23

SUMMARY OF INSPECTION OF MERCANTILE ESTABLISHMENTS  
1902-1906

	Number in which violations found	Inspections of places where violations found	Average inspections per place per year	Number of violations		
				Children without certificates	Other violations	Total
<b>New York</b>						
1902 . . . .						
1903 . . . .						
1904 . . . .						
1905 . . . .						
1906 . . . .						
<b>Manhattan</b>						
1902 . . . .						
1903 . . . .						
1904 . . . .						
1905 . . . .						
1906 . . . .						
<b>Bronx</b>						
1902 . . . .						
1903 . . . .						
1904 . . . .						
1905 . . . .						
1906 . . . .						
<b>Brooklyn</b>						
1902 . . . .						
1903 . . . .						
1904 . . . .						
1905 . . . .						
1906 . . . .						
<b>Queens</b>						
1902 . . . .						
1903 . . . .						
1904 . . . .						
1905 . . . .						
1906 . . . .						
<b>Richmond</b>						
1902 . . . .						
1903 . . . .						
1904 . . . .						
1905 . . . .						
1906 . . . .						

### LODGING HOUSE INSPECTION

Object	To promote the public health by maintaining sanitary conditions in licensed lodging houses.
Activities	Inspection of licensed lodging houses.
Relation of Activities to Object	As in several other lines of inspection maintained by the department of health, it is impossible to indicate any definite health results following from the work done. The absence of epidemics originating in lodging houses is hardly a measurable piece of evidence. As for the activities themselves, they are so miscellaneous (cf. pp. 112-113, Report of 1904) that reporting them in detail would be of little value. All that is suggested, therefore, is the number of places inspected, the number of inspections made, and the average number per place per year; for the rest, it must be left to the supervising officer to see that what is necessary is done.

### SHORE INSPECTION

Object	To keep shores clear of dead animals and offensive refuse. It is carried on only in Brooklyn and Richmond.
Activities	Inspection of shores.
Relation of Activities to Object	No definite health results can be ascribed to shore inspection. Even the inspection itself cannot be formulated with sufficient definiteness to be of value. A purely formal report is given of the number of inspections and of the number of objects removed from the shore.

Table 24

### LODGING HOUSE INSPECTION, 1905-1906

	Permits	Inspections	Average inspections per lodging house per year	
			1906	1905
New York . . . . .				
Manhattan . . . . .				
Bronx . . . . .				
Brooklyn . . . . .				
Queens . . . . .				
Richmond . . . . .				

Table 25

### SHORE INSPECTION, 1905-1906

	Brooklyn		Richmond	
	1905	1906	1905	1906
Inspections . . . . .				
Found and disposed of				
Human bodies . . . . .				
Carcasses of animals . . . . .				
Dogs . . . . .				
Cats . . . . .				
Rats . . . . .				
Goats . . . . .				
Sheep . . . . .				
Hogs . . . . .				
Calves . . . . .				
Horses . . . . .				
Fowls . . . . .				
Fish . . . . .				
Bedding, pieces . . . . .				
Clothing, pieces . . . . .				
Meats, pieces . . . . .				
Offal, pieces . . . . .				
Mattresses, number . . . . .				



## CIVIL AND CRIMINAL ACTIONS

Table 27-31

Persistent violations of law may be forwarded to the assistant corporation counsel who thereupon issues a notification of intention to commence civil action; if the compliance is secured by this notification alone, suit is not brought; continued non-compliance results in suit. Actions are discontinued, however, at almost any stage if compliance is obtained.

Table 27 gives the total violations handled by the assistant corporation counsel for civil action, Table 28 the total suits actually brought, together with their disposition. There is no exact relation between the number of violations on which suit is begun and the number of suits begun, for the reason that several suits may be, under various circumstances, brought on one violation.

The number of actions arriving at the point of judgment is too small to warrant their classification according to the violations of the law with which they originated. Not so, however, with the criminal actions. Out of 2724 cases in 1905, 2321 resulted in conviction in the same year,—a sufficiently large number to justify classification, as in Table 28.

Upon a judgment being vacated it becomes an action pending, and is then, after the order is reported complied with, counted as a civil action discontinued.

Table 29

Table 29 is a modification of a table now given in the annual reports of the department (see page 152, Report of 1904). The new form is designed to show for each line of inspection and for each borough the criminal actions begun, whether by arrests or summons, and the results of the actions. It is intended to include all criminal actions initiated by the department, whether in magistrates' courts or in special sessions. The subdivision between these is made in Tables 30-31.

Table 27

## VIOLATIONS FORWARDED TO THE ASSISTANT CORPORATION COUNSEL FOR CIVIL ACTION, 1906

	New York	Manhattan	Bronx	Brooklyn	Queens	Richmond
<b>VIOLATIONS RECEIVED</b>						
Violations pending January 1, 1906.....						
Violations received and notices sent.....						
Total violations during 1906.....						
<b>DISPOSITION</b>						
Complied with before suit.....						
Suit begun.....						
Pending (without suit) December 31, 1906 and awaiting instruction by department of health						
Total violations during 1906.....						

Table 28

## CIVIL ACTIONS BROUGHT BY THE ASSISTANT CORPORATION COUNSEL, 1906

	New York	Manhattan	Bronx	Brooklyn	Queens	Richmond
<b>ACTIONS BEGUN</b>						
Civil actions pending January 1, 1906.....						
Civil actions begun in 1906 to recover penalties on violations.....						
Other civil actions begun.....						
Judgments vacated*.....						
Total suits during 1906.....						
<b>DISPOSITION</b>						
Discontinued; compliance secured.....						
Judgment recovered.....						
Pending December 31, 1906.....						
Total suits during 1906.....						
Amount of costs, penalties and judgments collected in civil actions and paid to secretary of board of health.....						
Amount of claims collected before and after suit for antitoxin and virus and paid to secretary of board.....						

\*Upon a judgment being vacated it becomes an action pending, and is then, after the order is reported complied with, counted as a civil action discontinued

CRIMINAL ACTIONS FOR VIOLATION OF SANITARY CODE, CHARTER, STATUTES, AND ORDINANCES, 1906

	New York	Each of five boroughs
General sanitary inspection . . . . .	Warrant or summons	Warrant or Summons
Obedience to ordinances and regulations . . . . .	Presence of patrolman	Presence of patrolman
Street drainage or obstruction . . . . .	Total	Total
Keeping and use of animals . . . . .	Sentence suspended	Sentence suspended
Offensive trades . . . . .	Discharged	Discharged
Offensive materials . . . . .	Pending Dec. 31	Pending Dec. 31
Removal of filth . . . . .	Total	Total
Noise . . . . .	Amount of Fines	Amount of fines
Smoke . . . . .		
Spitting . . . . .		
Inspection of milk . . . . .		
Inspection of meat . . . . .		
Inspection of fruit, fish, and other foods . . . . .		
Inspection of mercantile establishments . . . . .		
Inspection of infectious diseases . . . . .		

Table 29

Table 30

CRIMINAL ACTIONS IN MAGISTRATES' COURTS, 1906

	New York	Manhattan	Bronx	Brooklyn	Queens	Richmond
<b>CASES</b>						
Pending January 1, 1906, in Magistrates' Courts.						
New cases during 1906 in Magistrates' Courts..						
Total cases.....						
<b>DISPOSITION</b>						
Held for Special Sessions.....						
Discharged .....						
Fined .....						
Sentence suspended.....						
Appealed .....						
Pending December 31, 1906.....						
Total cases .....						
Amount of fines.....						

Table 31

CRIMINAL ACTIONS IN COURT OF SPECIAL SESSIONS, 1906

	New York	Manhattan	Bronx	Brooklyn	Queens	Richmond
<b>CASES</b>						
Pending January 1, 1906.....						
Transferred from Magistrates' Courts.....						
New cases during 1906.....						
Total cases.....						
<b>DISPOSITION</b>						
Discharged .....						
Fined .....						
Sentence suspended.....						
Appealed .....						
Pending December 31, 1906.....						
Total cases .....						
Amount of fines.....						

Object	To diminish the prevalence of contagious diseases.
Activities	(a) Inspection of cases reported by attending physicians and school inspectors and through complaints. (b) Either quarantining or sending to a hospital the cases found. (c) Ordering of disinfection.

### Relation of Activities to Object

To assist in the work of inspection of contagious diseases, there are in Manhattan alone a few (at present, two) district nurses. Their work is so varied, so largely educative, so closely allied to that of district inspection, as to make it impracticable to attempt an entirely independent statement. Table 34 seems as much as is now feasible.

\* See pages 22, 23 and 24

*Table 32*

PREVALENCE OF CONTAGIOUS DISEASES, 1902-1906

	Number of cases reported					Number per 1,000 of population					
	New York	Manhattan	Bronx	Brooklyn	Queens	New York	Manhattan	Bronx	Brooklyn	Queens	Richmond
Diphtheria	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911
Scarlet fever	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911
Small-pox	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911
Chicken-pox	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911
Measles	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911
Whooping cough	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911

Table 33

Table 33 gives, for each disease, the number of cases reported and their disposition, the frequency of inspection of cases quarantined at home, the number of other inspections, and the number of disinfections of premises and of goods ordered.

The most significant figure is, perhaps, that of the average number of visits per case quarantined at home for its entire course, from which an approximate idea may be obtained of the thoroughness of the surveillance which the department is able to maintain.

The number and proportion of cases treated in the hospitals of the department is given in Table 68. The number of cases there given as treated will somewhat exceed the number given in this table as removed to hospitals, on account of the cases that simply "walk in."

The special inspections of institutions for orphans, destitute or vagrant children, or juvenile delinquents, provided for in Chapter 561 Laws of 1893, as amended by Section 2, Chapter 667, Laws of 1900, are given separately.

CONTAGIOUS DISEASES: DISTRICT MEDICAL INSPECTION, 1906  
*Table 33*

New York		Each of five boroughs						
		Diphtheria	Scarlet fever	Measles	Small-pox	Chicken-pox	German measles	Non-contagious
		Total	Total	Total	Total	Total	Total	Total
CASES REPORTED								
Cases reported Jan. 1, 1906.....								
Reports of cases during 1906.....								
Total.....								
DISPOSITION OF CASES								
Dropped as no case.....								
Quarantined at home until termination of case.....								
Treated in contagious disease hospital.....								
Isolated in other hospitals or institutions.....								
Not found.....								
Pending Dec. 31, 1906.....								
Total.....								
VISITS TO CASES*								
Visits to cases quarantined at home.....								
Other visits to cases.....								
Average visits per case quarantined at home until termination of case.....								
DISINFECTION								
Disinfections of premises ordered.....								
Removals of goods ordered for disinfection...								
DIAGNOSTICIANS								
Cases referred to diagnosticians.....								
Visits to cases by diagnosticians.....								
INSTITUTIONS†								
Institutions inspected.....								
Inspections.....								

\*Under general surveillance by department, but not visited regularly.  
 †Not including those by diagnosticians.  
 ‡Institutions for orphans, destitute or vagrant children, or juvenile delinquents: Chapter 561, Laws of 1893, as amended by Section 2, Chapter 667, Laws of 1900.

## MEDICAL INSPECTION OF SCHOOLS

Objects	<p>(a) To diminish the prevalence of contagious diseases among school children, and thereby indirectly among children under school age.</p> <p>(b) To discover in school children non-contagious physical defects which affect their power to do school work, and to urge upon parents the necessity of treatment.</p>
Activities	<p>(a) Systematic inspection of school children by physicians and nurses. Cases of general communicable diseases are excluded from school and referred to the district medical inspection force for proper isolation; in cases of communicable diseases of eye and skin, treatment is either given in school by the school nurses or secured through their urging it upon parents. In schools where there are no nurses, the more aggravated cases of eye and skin diseases and those persistently showing no evidence of treatment are excluded by the medical inspector.</p> <p>(b) Physical examination of children and notification of parents when treatment is needed.</p>
Relation of Activities to Object	<p>In so far as the activities under (a) are successful, there should be, over a series of years, a decreasing prevalence of contagious diseases among children of school age.</p> <p>In so far as the activities under (b) are successful, there should be ultimately a smaller proportion of children who are backward in their school work. But at present, records are not available which would show definitely and on a large scale the results of treatment for physical defects: such records, to avoid duplication, might best be maintained by the departments of education and health jointly. It is feasible, however, for the department of health to show in certain selected schools the results of treatment for certain specified defects (Table 41) and to show in general how far it is able to induce parents to secure treatment for their children (Tables 39-40).</p>

## SCHOOL NURSES

The work of the inspectors and the nurses is so intimately related that on the whole it is better to present a combined report. The following considerations, however, apply to the nurses alone:

(a) To cause a marked decrease in the prevalence among school children of communicable diseases of the eye and skin. Objects

(b) To reduce to a minimum the number of exclusions of children from school on account of such diseases.

"Routine" inspection to discover all cases of communicable eye and skin diseases (except trachoma, for which the inspectors examine); treatment according to directions by medical inspectors, or securing of treatment through instructions in school or visits at homes. Cases of pediculosis, however, are completely in the hands of the nurses. Activities

Success in achieving (a) should be seen in a decreasing prevalence of communicable diseases of eye and skin among the children of the schools in which the nurses work. In so far as (b) is achieved, a low percentage should be reached of exclusions for these diseases (Table 38). Relation of Activities to Objects

The comparisons suggested, it will be observed, are only of year with year in the schools where there are nurses, not of these schools with others where there are no nurses.

Table 34

## CONTAGIOUS DISEASES: DISTRICT NURSES' VISITS, 1904-1906

	Manhattan (none in other boroughs thus far)		
	Cases visited	Visits	Average visits per case
<b>Diphtheria</b>			
1904 . . . . .			
1905 . . . . .			
1906 . . . . .			
<b>Scarlet fever</b>			
1904 . . . . .			
1905 . . . . .			
1906 . . . . .			
<b>Measles</b>			
1904 . . . . .			
1905 . . . . .			
1906 . . . . .			

Table 35

## PREVALENCE OF CONTAGIOUS DISEASES IN SCHOOL CHILDREN

Case rate by years and boroughs, 1902-1906

	General communicable diseases *				Communicable diseases of eye and skin †	
	Number			Number per 1,000 registered in schools inspected	Number found by inspectors and nurses	Number per 1,000 registered in schools inspected
	Found by inspectors	Reported by attending physicians	Total			
	In school	Among absentees				
<b>New York</b>						
1902 . .						
1903 . .						
1904 . .						
1905 . .						
1906 . .						
<b>Manhattan</b>						
1902 . .						
1903 . .						
1904 . .						
1905 . .						
1906 . .						
<b>Bronx</b>						
1902 . .						
1903 . .						
1904 . .						
1905 . .						
1906 . .						
<b>Brooklyn</b>						
1902 . .						
1903 . .						
1904 . .						
1905 . .						
1906 . .						
<b>Queens</b>						
1902 . .						
1903 . .						
1904 . .						
1905 . .						
1906 . .						
<b>Richmond</b>						
1902 . .						
1903 . .						
1904 . .						
1905 . .						
1906 . .						

\* Small-pox, diphtheria, scarlet fever, measles, chicken-pox, mumps, and whooping cough; excluded when found

† Trachoma and other contagious eye diseases, ringworm, impetigo, scabies, favus, and pediculosis; excluded only for persistent non-treatment

Table 36

## CONTAGIOUS DISEASES FOUND IN SCHOOLS BY INSPECTORS AND NURSES: 1906

Number and disposition of cases

	General communicable diseases							Communicable diseases of eye and skin								Total
	Diph- theria	Scarlet fever	Measles	Small-pox	Chicken- pox	Whooping cough	Mumps	Total	Trachoma	Eye*	Ring- worm	Impetigo	Scabies	Favus	Pedicu- losis	
New York																
Cases found in schools†																
Cases excluded from school																
Cases treated in school‡																
Cases instructed in school, or evidence of treatment furnished‡																
Number of treatments‡																
Number of instructions‡																
Manhattan																
Cases found in schools†																
Cases excluded from school																
Cases treated in school‡																
Cases instructed in school, or evidence of treatment furnished‡																
Number of treatments‡																
Number of instructions‡																
Bronx																
Cases found in schools†																
Cases excluded from school																
Cases treated in school‡																
Cases instructed in school, or evidence of treatment furnished‡																
Number of treatments‡																
Number of instructions‡																
Brooklyn																
Cases found in schools†																
Cases excluded from school																
Cases treated in school‡																
Cases instructed in school, or evidence of treatment furnished‡																
Number of treatments‡																
Number of instructions‡																
Queens																
Cases found in schools†																
Cases excluded from school																
Cases treated in school‡																
Cases instructed in school, or evidence of treatment furnished‡																
Number of treatments‡																
Number of instructions‡																
Richmond																
Cases found in schools†																
Cases excluded from school																
Cases treated in school‡																
Cases instructed in school, or evidence of treatment furnished‡																
Number of treatments‡																
Number of instructions‡																

\*Other contagious eye diseases

†The general communicable diseases and trachoma by inspectors only; other diseases by nurses in schools where there are nurses, otherwise by inspectors

‡By nurses under prescribed directions

§By nurses

Table 37

Table 37 is intended to show, for inspection of contagious diseases in school children, the field covered (number of schools and registration), the frequency of inspection (average visits per school per year), the number of examinations of children made, and finally the number of cases of disease discovered, these totals corresponding to those in Tables 35 to 36. In examinations of children and cases discovered, the work of the inspectors and of the nurses is presented separately. The frequency of visits is not given for the nurses because their work is more accurately judged on the basis of examinations and cases.

Table 38

While the work of the nurses should show in the total results stated for all schools in the foregoing tables, the justification for their work would be brought out more clearly by a brief separate statement covering only the field in which their work lies. Table 38 is for the purpose of showing how far the two main objects of their work are attained (See page 93).

Table 39

Table 39 shows, in reference to examination of school children for non-contagious physical defects, the field that should be covered (the total registration), the field that is covered, the number and proportion of those examined who are found to need treatment, and the number and proportion of those needing treatment who are known to have received it.

Table 37

MEDICAL INSPECTION OF SCHOOL CHILDREN FOR CONTAGIOUS  
DISEASES, 1906

	New York	Man- hattan	Bronx	Brook- lyn	Queens	Rich- mond
<b>FIELD OF INSPECTION</b>						
Total number of public schools.....						
Registration .....						
Public schools under inspection.....						
Registration .....						
Other schools under inspection.....						
Registration .....						
Total schools under inspection.....						
Total registration of schools under inspection.						
Schools in which there are nurses.....						
Registration .....						
<b>VISITS TO SCHOOLS</b>						
By inspectors to public schools.....						
By inspectors to other schools.....						
<b>Average per school per year</b> .....						
Public schools .....						
Other schools .....						
<b>EXAMINATIONS</b>						
"Morning" examinations of children by in- spectors* .....						
General communicable diseases found.....						
"Routine" examinations by inspectors†.....						
Cases found, eye and skin diseases.....						
"Routine" examinations by nurses†.....						
Cases found, eye and skin diseases.....						
Special "routine" examinations by inspectors for trachoma .....						
Cases found .....						
Total general communicable diseases found in schools .....						
Total cases found in schools, eye and skin diseases .....						
<b>VISITS TO HOMES</b>						
By inspectors .....						
By nurses .....						

\*In "morning" examinations, the inspectors examine the children referred to them by teachers or nurses as suspected cases, or children returning to school after absence on account of sickness

†"Routine" examinations are made by nurses in schools where there are nurses, otherwise by inspectors. The entire class is examined to discover any cases of eye and skin diseases except trachoma, for which a special "routine" examination is made by inspectors only

Table 38

PREVALENCE OF COMMUNICABLE EYE AND SKIN DISEASES IN  
SCHOOLS IN WHICH THERE ARE NURSES, AND PROPORTION OF  
EXCLUSIONS THEREFOR, 1902-1906

	Registration* of schools in which there are nurses	Cases found, eye and skin diseases	Cases per 1,000 of registration	Exclusions therefor	Exclusions per 1,000 of registration
<b>New York City</b>					
1902 . . . . .					
1903 . . . . .					
1904 . . . . .					
1905 . . . . .					
1906 . . . . .					
<b>Manhattan</b>					
1902 . . . . .					
1903 . . . . .					
1904 . . . . .					
1905 . . . . .					
1906 . . . . .					
<b>Bronx</b>					
1902 . . . . .					
1903 . . . . .					
1904 . . . . .					
1905 . . . . .					
1906 . . . . .					
<b>Brooklyn</b>					
1902 . . . . .					
1903 . . . . .					
1904 . . . . .					
1905 . . . . .					
1906 . . . . .					
<b>Queens</b>					
1902 . . . . .					
1903 . . . . .					
1904 . . . . .					
1905 . . . . .					
1906 . . . . .					
<b>Richmond</b>					
1902 . . . . .					
1903 . . . . .					
1904 . . . . .					
1905 . . . . .					
1906 . . . . .					

\*Average of the registration on the last school day of each month

Table 39

EXAMINATION AND TREATMENT OF SCHOOL CHILDREN FOR  
NON-CONTAGIOUS PHYSICAL DEFECTS, 1902-1906

Comparative summary by years and boroughs

	1902	1903	1904	1905	1906
<b>NEW YORK</b>					
<b>EXAMINATION</b>					
Total registration in public schools . . . . .					
Number of children examined . . . . .					
Percentage of total registration . . . . .					
Number needing treatment . . . . .					
Percentage of those examined needing treatment . . . . .					
<b>TREATMENT</b>					
Number known to have been treated . . . . .					
Percentage of those needing treatment known to have been treated . . . . .					
<b>EACH OF FIVE BOROUGHES</b>					
<b>EXAMINATION</b>					
Total registration in public schools . . . . .					
Number of children examined . . . . .					
Percentage of total registration . . . . .					
Number needing treatment . . . . .					
Percentage of those examined needing treatment . . . . .					
<b>TREATMENT</b>					
Number known to have been treated . . . . .					
Percentage of those needing treatment known to have been treated . . . . .					



Table 41

## PROMOTIONS AMONG CHILDREN TREATED AND NOT TREATED FOR ADENOIDS, 1906

Selected list of schools

School Number — . . .	During first half of term *			Treated		Not treated		
	Found needing treatment	Reported treated	Not known to be treated	Promoted No.	Not promoted No.	Promoted No.	Not promoted No.	Discon- tinued
" — . . .				\$	\$	\$	\$	
" — . . .								
" — . . .								

\*February 1—April 15—September 1—November 15

Table 42  
NATIVITY OF SCHOOL CHILDREN NEEDING TREATMENT, 1906

	New York	Manhattan	Bronx	Brooklyn	Queens	Richmond
Children found needing treatment.....						
Native born .....						
Foreign born .....						
Percentage foreign born .....						
One or both parents foreign born.....						
Percentage of total.....						

Exhibit 4—Continued

Exhibit 4—Continued

Table 41

Table 42

See page 92

The figures given in this table, when taken alone, of course mean little: they must be compared with the numbers of each class in the entire school registration. The figures are provided for, however, at the suggestion of a department official, and in connection with figures obtainable from the department of education might be of value.

## SUMMER CORPS

**Object** . . . . . To diminish the prevalence of diarrheal diseases during the summer months among children under two years of age.

Activities	Investigation and inquiry by medical inspectors and nurses to discover cases of diarrheal diseases, and treatment or instruction of cases not attended by private physicians.
------------	---

Relation of Activities to Object	<p>The work done is largely educational, consisting of furthering intelligent care and feeding of babies. While attention is primarily directed towards the care of babies already sick, the instructions given should operate both to prevent recurrence of sickness and to avert new cases. The work is thus both preventive and curative.</p>
----------------------------------	--

Since diarrheal diseases are not among those regularly reported to the department, figures to show their prevalence are difficult to get. The visits of the inspectors and nurses, however, constitute when tabulated an approximate census in the districts covered; on this as a basis can be stated the proportion of cases found to the total number of children recorded (Table 43).

*Tables 44-46*

Tables 44-46 are compiled from the daily inspection records. They show the relative prevalence of the different methods of feeding, and the proportion of sickness and deaths accompanying each.

Table 43

## SUMMER CORPS, 1906

	New York	Manhattan	Bronx	Brooklyn	Queens	Richmond
<b>CHILDREN UNDER 2 YEARS</b>	Inspectors	Inspectors	Inspectors	Inspectors	Inspectors	Inspectors
Estimated number in population . . . . .	Nurses	Nurses	Nurses	Nurses	Nurses	Nurses
Visited once only . . . . .						
" twice " . . . . .						
Three times or more . . . . .						
<b>Percentage visited at least once . . . . .</b>						
Total visits . . . . .						
<b>Average visits per child during summer.</b>						
<b>CASES FOUND</b>						
Attended by private physician . . . . .						
" " inspector or nurse . . . . .						
Once only . . . . .						
Twice " . . . . .						
Three times or more . . . . .						
Total visits to sick . . . . .						
<b>Average visits per case . . . . .</b>						
<b>Cases found per 1,000 children visited . . .</b>						
<b>MISCELLANEOUS WORK</b>						
Milk inspections made . . . . .						
Circulars distributed . . . . .						
Ice tickets distributed . . . . .						
Milk tickets distributed . . . . .						

Table 44  
SUMMER CORPS: SUMMARY, 1902-1906

	Children visited	Cases of diarrheal diseases found	Cases per 1,000 children visited	Children treated by department
1902 .....				
1903 .....				
1904 .....				
1905 .....				
1906 .....				

Table 45  
METHODS OF FEEDING OF CHILDREN REGISTERED BY SUMMER  
CORPS, 1906

	Under 9 months				Over 9 and under 24 months			
	No.	% of total	With diar. dis.		No.	% of total	With diar. dis.	
			No.	%			No.	%
Breast fed .....								
Milk: modified .....								
Milk: boiled at home.....								
Milk: pasteurized, Straus.....								
Milk: pasteurized, commercial.....								
Milk: condensed .....								
Patent food .....								
Table food .....								
Raw fruit .....								
Mixed feeding .....								
Total .....								

Table 46  
METHODS OF FEEDING OF CHILDREN DYING FROM DIARRHEAL  
DISEASES AND INVESTIGATED BY SUMMER CORPS, 1906

	Under 9 months		Over 9 and under 24 months	
	No.	% of total	No.	% of total
Breast fed .....				
Milk: modified .....				
Milk: boiled at home.....				
Milk: pasteurized, Straus.....				
Milk: pasteurized, commercial.....				
Milk: condensed .....				
Patent food .....				
Table food .....				
Raw fruit .....				
Mixed feeding .....				
Total .....				

## VACCINATION

To reduce to a minimum the prevalence of small-pox.

Vaccination of as many people as possible at sufficiently frequent intervals. Vaccination is carried out:

(a) By a corps of school vaccinators who spend all their time in vaccinating children in the public schools. They make a complete circuit of the public schools in from four to five years (Table 47).

(b) By school medical inspectors, who vaccinate on Saturdays and school holidays, and during vacation in districts assigned to them; by the summer corps, wherever the inspectors happen to find cases needing it; by physicians at the department offices; by a special vaccinator on Blackwell's Island; and by the hospitals, which vaccinate those entering for whatever cause. Miscellaneous vaccinations may be performed by other members of the department (Table 48).

If everybody were vaccinated effectively and at sufficiently frequent intervals (once in four years), there would be a minimum of small-pox; in general, the higher the percentage of the people in the city who are vaccinated, the lower will be the case rate and death rate of small-pox. But other factors enter in: district medical inspection in the early discovery and diagnosis of the disease; disinfection; and hospital care, which is both preventive and curative.

It is to be noted that in vaccination more than in most other lines of work under consideration, judgments are not valid unless based on figures for long periods, for the reason that immunity may persist con-

Object

Activities

Relation of  
Activities  
to Object

siderably longer than four years; and because, secondly, even if immunity does sink to a lower point, a serious exposure of the city to the disease may not occur for several years. Hence statements of small-pox prevalence covering short periods are practically valueless as an index to the efficiency of vaccination.

The only way of knowing how many persons at any given time need vaccination is so far from accurate as to be of little value.

As the work of the department is organized, however, it is possible to give figures to show what proportion of the school population has been examined in any one year and either vaccinated or found not needing vaccination. For the rest, since no population figures are available for the districts in which the vaccinations are made, the best that can be done is to express the total number of vaccinations (including those in schools) as a percentage of the total population. This percentage, when compared with the case and death rate for a considerable number of years, may work out a standard of the proportion of the population necessary to vaccinate annually.

Table 47

## VACCINATIONS IN SCHOOLS, 1906

	New York	Manhattan	Bronx	Brooklyn	Queens	Richmond
<b>FIELD OF WORK</b>						
Total public school registration.....						
Registration in schools covered by school vaccinators during 1906.....						
<b>WORK PERFORMED</b>						
Children examined .....						
Children vaccinated by department physicians.						
Children vaccinated by other physicians.....						
Children not requiring vaccination.....						
<b>Percentage of children examined to total school registration.....</b>						

Table 48

## TOTAL VACCINATIONS BY DEPARTMENT OF HEALTH, 1906

	New York	Manhattan	Bronx	Brooklyn	Queens	Richmond
Vaccinations in public schools*.....						
" in other schools.....						
" in districts .....						
" at offices .....						
" at Blackwell's Island.....						
" at hospitals .....						
" by summer corps .....						
<b>Percentage of vaccinations to total estimated population† .....</b>						
<b>Total vaccinations .....</b>						

\*By special vaccinators and by school inspectors

†Possible duplications included

Table 49

## VACCINATIONS BY DEPARTMENT OF HEALTH, 1902-1906

	Vaccinations by department of health	Per cent. of estimated population
1902 .....		
1903 .....		
1904 .....		
1905 .....		
1906 .....		

## DISINFECTION

## Object

To assist district medical inspection in diminishing the prevalence of contagious and communicable diseases.

## Activities

(a) Disinfection, as ordered by medical inspectors, of rooms or houses which have been occupied by cases of the following contagious diseases: small-pox, diphtheria, scarlet fever, measles; by cases of the following communicable diseases: tuberculosis, typhoid fever (on request of physicians), cerebro-spinal meningitis; and disinfection of stables occupied by cases of glanders in horses.

(b) Disinfection, as ordered by medical inspectors, of bedding and other goods infected by cases of the above diseases.

Relation of  
Activities  
to Object

In all the contagious diseases mentioned and in cerebro-spinal meningitis, disinfection, though it does not possess an equal value, is now an accepted practice; in general, all cases are supposed to be disinfected at their termination either in private houses by physicians (except small-pox) or by the department. In tuberculosis, disinfection is freely employed, chiefly following deaths, removals from one address to another, from the city and to hospitals or sanatoria. In typhoid, disinfections are performed only at the request of physicians. In glanders of horses, since the period of possible contagion is indefinitely long, and since in practice it proves impossible to find any stated proportion of infected stables, no formulation is possible.

It is hardly feasible to demonstrate the value of disinfection statistically through the ordinary departmental routine; for that purpose, a special experiment would have to be arranged, in which the conditions were more thoroughly under control. In regular reports, the work performed is all that it is practicable to show.

Table 50

## DISINFECTION OF PREMISES, 1906

	New York	Man- hattan	Bronx	Brook- lyn	Queens	Rich- mond
<b>DISINFECTIONS PERFORMED *</b>						
Scarlet fever .....						
Diphtheria .....						
Measles .....						
Small-pox .....						
Tuberculosis .....						
Typhoid .....						
Cerebro-spinal meningitis .....						
Glanders of horses .....						
Miscellaneous .....						
Total .....						
Number of visits, disinfection not performed..						
Number of rooms disinfected.....						

\* The disinfections performed, as shown in Tables 50-51, will correspond with the disinfections ordered, as given in the tables for district inspection in the division of contagious and communicable diseases, with the qualification that disinfections in upper Manhattan may for convenience be performed by Bronx disinfectors

Table 51

## GOODS DISINFECTED OR DESTROYED, 1906

	New York	Man- hattan	Bronx	Brook- lyn	Queens	Rich- mond
Lots of goods* on hand Jan. 1, 1906.....						
Received during 1906						
By order from divisions of contagious and communicable diseases .....						
From hospitals .....						
Miscellaneous .....						
Total during 1906.....						
Lots of goods disinfected.....						
Lots of goods destroyed.....						
Lots of goods on hand Dec. 31, 1906.....						
Number of articles disinfected .....						
Number of articles destroyed .....						

\* A "lot of goods" consists of all the articles removed for disinfection or destruction at the close of a case

## ANIMAL INSPECTION

**Object** To prevent the spread of contagious diseases, chiefly glanders, rabies, and tuberculosis, among animals, thus indirectly protecting the public health.

**Activities** Inspection of suspected cases of these diseases; destruction of those diagnosed as true cases; ordering of disinfection (gladders).

**Relation of Activities to Object** Success in this line of work would theoretically show in a decreasing prevalence of the diseases mentioned. As it is impossible, however, to get with accuracy the number of animals in the city, the best that can be done is to report the absolute numbers of cases occurring, inspected, and disposed of (Table 53).

The number of disinfections ordered will have no fixed relation to the number of cases found, since some cases involve several disinfections, while in others the stables cannot be located.

## DEPARTMENT STABLES

The same qualification as in Tables 50-51 holds in Table 53 with reference to the calls of ambulances and goods wagons. The calls in upper Manhattan may be made by the Bronx drivers.

The last part of the table is designed to show the amount of horse service maintained.

Table 52

## ANIMAL INSPECTION, 1906

	New York	Manhattan	Bronx	Brooklyn	Queens	Richmond
<b>HORSES</b>						
Examinations of horses .....						
Horses tested with mallein.....						
Glandered horses condemned and destroyed....						
Post-mortem examinations of horses.....						
Inspections of stables .....						
Disinfection of stables ordered.....						
<b>DOGS</b>						
Examinations of dogs .....						
Animals referred to research laboratory for diagnosis of rabies .....						
Cases of rabies .....						
<b>COWS</b>						
Examinations of cows .....						
Cows tested with tuberculin.....						
Cows condemned .....						
<b>MISCELLANEOUS</b>						
Examinations of other animals.....						

Table 53

## DEPARTMENT STABLES, 1906

	New York	Manhattan	Bronx	Brooklyn	Queens	Richmond
<b>AMBULANCE DRIVERS</b>						
Cases removed to hospitals.....						
Bodies removed to morgue.....						
Other visits made.....						
Total visits .....						
Number of times ambulances or other vehicles disinfected .....						
<b>GOODS WAGON DRIVERS</b>						
Visits, infected goods removed.....						
Visits, disinfected goods returned .....						
Other visits made .....						
Total visits .....						
<b>STABLE SERVICE</b>						
Average number of horses cared for*.....						
For ambulances and goods wagons.....						
For executive officials .....						
Total days care for all horses .....						
For ambulance and wagon horses .....						
For horses of officials .....						

\*Average of those under care on the 1st of each month

## DIVISION OF COMMUNICABLE DISEASES

Object

To diminish the prevalence of the diseases classed as "communicable," by both preventive and curative means. The main emphasis has so far been placed by the division upon tuberculosis, diphtheria, typhoid, and cerebro-spinal meningitis; in pneumonia, malarial fever, erysipelas, and puerperal septicaemia, the work of the division has not yet been developed to any considerable extent.

Activities

The activities of the division vary so with the different diseases concerned that a separate statement is required for each disease.

## TUBERCULOSIS

**Registration.** Obtaining and recording the essential facts in all known cases in the city; tracing of cases to keep records up to date (Table 56).

**District Inspection.** Visits by inspectors where disinfection is likely to be necessary (deaths, cases removing from city, to hospitals or sanatoria, or to other addresses) and to cases at home, on complaint; reference of appropriate cases to hospitals and sanatoria; compulsory removal to hospitals, when necessary; renovation of habitations (through the division of inspections); ordering of disinfection (Table 58). Weekly visits by nurses to cases at home requiring to be kept under observation (Table 58).

**Clinics.** Early recognition and diagnosis of cases; reference of cases to hospitals and sanatoria; supervision of patients in their homes (Table 59).

## DIPHTHERIA

Injection of antitoxin; intubation of laryngeal cases needing intubation; immunization of well persons exposed (Table 61).

## TYPHOID

## CEREBRO-SPINAL MENINGITIS

Inspection; requiring of precautions against infection (analogous to maintenance of quarantine); ordering of disinfection; investigation of sources of infection (Tables 63-64).

Activities

## MALARIAL FEVER

## PNEUMONIA

Investigation of death reports to verify cause (Table 65).

## ERYSIPELAS

## PUERPERAL SEPTICÆMIA

Only recording deaths as reported (Table 65).

## DIAGNOSIS LABORATORY

The diagnosis laboratory provides free examination of and report upon specimens submitted to it for diagnosis.

The terms in which health results may be measured vary also with the disease.

In tuberculosis, significant figures are difficult to get. It is only since 1897 that tuberculosis has been included among the diseases compulsorily reported to the department of health. Since that time, until 1906, there has been an almost steady rise in the number of cases reported, a rise probably due in the main to increased thoroughness of reporting. 1906, however, showed a decrease over 1905 in the number of cases reported, and it is not unlikely that a sufficient completeness in reporting has been reached to make the number of new cases reported (per 1,000 of population) a fairly reliable standard (Table 54). The

Relation of  
Activities  
to Objects

Tuberculosis  
Case Rate

death rate from all tuberculous diseases and pulmonary tuberculosis can be used as a check. Another index of progress in the campaign against tuberculosis is the death rate of children under 15 from pulmonary tuberculosis and tubercular meningitis, "the two forms of tuberculous diseases in which an approximately accurate diagnosis is likely to be made in children. It is in this, the youngest element of the population, that one would first look for definite results from the enforcement of measures for the restriction of this disease" (Table 55).

Diphtheria  
Case Rate

In diphtheria, the success of the antitoxin method is seen in the falling case fatality for a series of years (Table 60). The efficiency of antitoxin injection by the division may be judged by comparing the case fatality of the cases treated with the general case fatality, and with the case fatality of the cases treated by private physicians with free antitoxin. In immunization, the number of persons immunized who contract the disease between two and thirty days after exposure can be given; but of course there is no way of knowing how many would have contracted the disease without immunization (Table 61).

Typhoid  
Case Rate

In typhoid fever and cerebro-spinal meningitis both the case rate and death rate are of value (Table 62).

Other Case  
Rates

In pneumonia, malarial fever, erysipelas, and puerperal septicaemia, since no organized work is maintained which would affect the public health, no vital statistics are given.

The diagnosis laboratory being a subsidiary line of work no health results can be directly traced to its work. The report records the specimens examined and the results of examination (Table 66), together with the number submitted by members of the department and by private physicians respectively (Table 67).

\*Biggs, "Administrative Control of Tuberculosis," p. 28

Table 54  
TUBERCULOSIS: GENERAL FIGURES, 1897-1906

Year	New cases reported, phthisis*	Duplicates	Deaths, phthisis, cases not previously reported	Total new cases, phthisis	New cases, phthisis, per 1,000 of population	Total deaths, phthisis	Deaths, other tuberc.	Total tuberc. deaths	Deaths, phthisis, per 1,000 of population	Deaths, all tuberc., per 1,000 of population
<b>New York</b>										
1897..										
1898..										
1899..										
1900..										
1901..										
1902..										
1903..										
1904..										
1905..										
1906..										
<b>Manhattan</b>										
1897..										
1898..										
1899..										
1900..										
1901..										
1902..										
1903..										
1904..										
1905..										
1906..										
<b>Bronx</b>										
1897..										
1898..										
1899..										
1900..										
1901..										
1902..										
1903..										
1904..										
1905..										
1906..										
<b>Brooklyn</b>										
1897..										
1898..										
1899..										
1900..										
1901..										
1902..										
1903..										
1904..										
1905..										
1906..										
<b>Queens</b>										
1897..										
1898..										
1899..										
1900..										
1901..										
1902..										
1903..										
1904..										
1905..										
1906..										
<b>Richmond</b>										
1897..										
1898..										
1899..										
1900..										
1901..										
1902..										
1903..										
1904..										
1905..										
1906..										

\*Excluding duplicates

Table 55

DEATHS FROM PULMONARY TUBERCULOSIS AND TUBERCULAR  
MENINGITIS, 0-15 YEARS, 1897-1906

	0 - 5		5 - 10		10 - 15		Total under 15		Deaths, both, per 1,000 of popula- tion
	Pul. tub.	Tub. men.	Pul. tub.	Tub. men.	Pul. tub.	Tub. men.	Pul. tub.	Tub. men.	
New York									
1897 . .									
1898 . .									
1899 . .									
1900 . .									
1901 . .									
1902 . .									
1903 . .									
1904 . .									
1905 . .									
1906 . .									
Manhattan									
1897 . .									
1898 . .									
1899 . .									
1900 . .									
1901 . .									
1902 . .									
1903 . .									
1904 . .									
1905 . .									
1906 . .									
Bronx									
1897 . .									
1898 . .									
1899 . .									
1900 . .									
1901 . .									
1902 . .									
1903 . .									
1904 . .									
1905 . .									
1906 . .									
Brooklyn									
1897 . .									
1898 . .									
1899 . .									
1900 . .									
1901 . .									
1902 . .									
1903 . .									
1904 . .									
1905 . .									
1906 . .									
Queens									
1897 . .									
1898 . .									
1899 . .									
1900 . .									
1901 . .									
1902 . .									
1903 . .									
1904 . .									
1905 . .									
1906 . .									
Richmond									
1897 . .									
1898 . .									
1899 . .									
1900 . .									
1901 . .									
1902 . .									
1903 . .									
1904 . .									
1905 . .									
1906 . .									

Table 56

## TUBERCULOSIS REGISTER: LIVING CASES, 1906

	New York	Man- hattan	Bronx	Brook- lyn	Queens	Rich- mond
Cases enrolled January 1, 1906.....						
Under care of private physicians.....						
Under care of dispensaries or clinics*.....						
At home and under supervision of department.						
In institutions in city .....						
In institutions outside city.....						
Not found at address given;† 1904 and 1905....						
New (living) cases reported.....						
By physicians .....						
By sputum .....						
By institutions .....						
Total living cases enrolled in 1906.....						
Cases removed from register in 1906.....						
Deaths .....						
Removals from city .....						
Not found;† held for 2 years.....						
Recovered .....						
Cases enrolled December 31, 1906.....						
Under care of private physicians.....						
Under care of dispensaries or clinics.....						
At home and under supervision of department.						
In institutions in city.....						
In institutions outside city.....						
Not found at address given;† 1905 and 1906..						
Total .....						

\*Other than the department clinics

†Held in current register 2 years; after that time, removed to files

Table 57

As is seen in Table 56, cases of tuberculosis are classified for administrative purposes in six groups. The cases visited by the inspectors may be found in almost any of these: no exact statement is made of the number of cases which they might be expected to visit. The determination of whether or not they visit all the cases that they should is for the present a matter for the current office records.

In two other main lines of the division's work, however, a standard is possible. The "at home" file, which contains the cases on which the work of the district nurses and of the clinics is done, is capable of the same form of statement as a hospital—substituting "at home" months for patient days. If 10 patients are "at home," one for 2 months, one for 3 months, etc., a total of 50 months for all, while the district nurses keep under observation during that time one patient for 1 month, one patient for 2 months, etc., a total of 15 months, and if the clinic also has under treatment patients for a total of 20 months, then 30% represents the proportion of the "at home" field covered by the district nurses, 40% the proportion covered by the clinics, and 70% the proportion covered by both. It is quite probable that it is unnecessary to keep the entire "at home" group under constant observation or treatment. The above percentages, however, given year by year, would work out a standard on the basis of experience.

Table 57

SUMMARY OF DISTRICT INSPECTION OF TUBERCULOSIS  
AND OF  
TREATMENT BY THE DEPARTMENT CLINICS, 1906

	New York	Man- hattan	Bronx	Brook- lyn	Queens	Rich- mond
TOTAL MONTHS ALL "AT HOME" CASES						
Months "at home" cases under observation by district nurses .....						
Percentage of total months .....						
Months "at home" cases under treatment or observation by department clinics .....						
Percentage of total months .....						
Months "at home" cases under observation or treatment by both district nurses and clinics ...						
Percentage of total months all "at home" cases .....						

Table 58

It may be expected that the number of disinfections ordered will have an approximate (though only an approximate) correspondence with the number of premises visited on account of deaths or removals.

The average frequency of visits by nurses to cases under observation is worked out in the same form as that employed in Table 57. If as is expected, they visit each case once a week, the average visits per month per case under observation will be approximately 4.

Table 59

In Table 59, the item, "Old cases coming under treatment in 1906," is introduced in order to make an exact balance with the number of dispositions made of cases given immediately below. As the same case may be sent to a hospital or otherwise disposed of several times during a year, it is necessary to provide as above for the duplicate entries. The "total," therefore, does not represent the number of different persons under treatment during the year: if this figure is desired, it can be obtained by adding the items "Under treatment January 1" and "New cases coming under treatment in 1906."

The average frequency of clinic treatment and of visits by nurses to cases kept under observation is shown by means of the same form of statement as is employed in Table 57. As the cases kept under observation by the nurses are expected to be visited once a week, the item "Average visits per month per case under observation" will presumably be found to be about 4.

Table 58

## TUBERCULOSIS: DISTRICT INSPECTION, 1906

	New York	Manhattan	Bronx	Brooklyn	Queens	Richmond
<b>INSPECTORS</b>						
Premises visited on account of deaths* .....						
Cases removing to hospital†.....						
Cases removing from city†.....						
Cases changing address†.....						
Cases "at home" visited on complaint.....						
Total cases inspected.....						
Visits to cases inspected.....						
Visits to investigate or trace cases.....						
Total visits by inspectors.....						
<b>NURSES</b>						
Total months all "at home" cases under observation by district nurses.....						
Visits to cases "at home" under observation.....						
Average visits per month per case "at home" under observation.....						
Visits to investigate or trace cases.....						
Total visits by district nurses.....						
<b>DISPOSITION OF CASES.....</b>						
Forcible removals to hospital.....						
References of cases to hospitals.....						
References of cases to charitable organizations.....						
Renovations compelled by inspectors' complaints.....						
Renovations made voluntarily.....						
Disinfections of premises ordered.....						
Disinfections of goods ordered.....						

\*From any one of several files, or not previously reported

†From any one of several files

Table 59

## TUBERCULOSIS CLINICS, 1906

	New York	Manhattan	Bronx	Brooklyn
<b>DIAGNOSIS</b>				
Under observation for diagnosis Jan. 1, 1906..				
New patients examined during 1906.....				
Total .....				
Found not tubercular and transferred or discharged .....				
Found tubercular .....				
Diagnosis tubercular, sputum positive.....				
Diagnosis tubercular, sputum negative.....				
Under observation for diagnosis Dec. 31, 1906..				
Total .....				
<b>CASES UNDER TREATMENT</b>				
Under treatment Jan. 1, 1906.....				
New cases coming under treatment in 1906....				
Old cases coming under treatment in 1906....				
Total .....				
Deaths .....				
Transferred to other clinics.....				
Transferred to hospitals.....				
Transferred to sanatoria.....				
Discontinuing, not found.....				
Discontinuing, not coming for treatment.....				
Under treatment Dec. 31, 1906.....				
Total .....				
<b>Total months all patients under treatment by clinics .....</b>				
<b>Total treatments of patients .....</b>				
<b>Average treatments per month per patient .....</b>				
Largest number of patients in 1 day.....				
Smallest number of patients in 1 day.....				
Average number of patients in 1 day.....				
<b>VISITS TO CASES</b>				
<b>Total months all patients under observation by clinic nurses .....</b>				
<b>Visits to patients under observation .....</b>				
<b>Average visits per month per case under observation .....</b>				
Other visits to cases under clinic treatment....				
Total visits by clinic nurses.....				
Visits by clinic physicians.....				
<b>MISCELLANEOUS</b>				
Prescriptions filled for clinic patients.....				
Quarts of milk supplied to clinic patients.....				
Eggs supplied to clinic patients.....				

Table 60

## DIPHTHERIA: GENERAL FIGURES, 1897-1906

Year	Cases reported	Cases per 1,000 of population	Deaths	Deaths per 1,000 of population	Case fatality per cent.	Per cent. of cases reported, injected at home by dept. of health
<b>New York</b>						
1897 .....						
1898 .....						
1899 .....						
1900 .....						
1901 .....						
1902 .....						
1903 .....						
1904 .....						
1905 .....						
1906 .....						
<b>Manhattan</b>						
1897 .....						
1898 .....						
1899 .....						
1900 .....						
1901 .....						
1902 .....						
1903 .....						
1904 .....						
1905 .....						
1906 .....						
<b>Bronx</b>						
1897 .....						
1898 .....						
1899 .....						
1900 .....						
1901 .....						
1902 .....						
1903 .....						
1904 .....						
1905 .....						
1906 .....						
<b>Brooklyn</b>						
1897 .....						
1898 .....						
1899 .....						
1900 .....						
1901 .....						
1902 .....						
1903 .....						
1904 .....						
1905 .....						
1906 .....						
<b>Queens</b>						
1897 .....						
1898 .....						
1899 .....						
1900 .....						
1901 .....						
1902 .....						
1903 .....						
1904 .....						
1905 .....						
1906 .....						
<b>Richmond</b>						
1897 .....						
1898 .....						
1899 .....						
1900 .....						
1901 .....						
1902 .....						
1903 .....						
1904 .....						
1905 .....						
1906 .....						

Table 61

## DIPHTHERIA: INJECTION, INTUBATION, AND IMMUNIZATION, 1906\*

	New York	Manhattan	Bronx	Brooklyn	Queens	Richmond
<b>INJECTION OF ANTITOXIN</b>						
Cases of diphtheria reported.....						
Cases injected by dept. inspectors.....						
Percentage injected by dept. inspectors..						
Cases injected by private physicians†.....						
Percentage injected by private physicians						
By department inspectors.....						
Cases injected.....						
Deaths .....						
Case fatality, per cent. ....						
Deaths, moribund‡ deducted.....						
Case fatality, per cent., moribund ‡ deducted .....						
By private physicians† .....						
Cases injected.....						
Deaths .....						
Case fatality, per cent. ....						
Deaths, moribund‡ deducted.....						
Case fatality, per cent., moribund ‡ deducted .....						
<b>INTUBATION OF LARYNGEAL CASES</b>						
Cases injected by dept. inspectors.....						
Total laryngeal cases.....						
Deaths .....						
Fatality per cent.....						
Cases intubated.....						
Deaths .....						
Fatality per cent.....						
Cases not intubated.....						
Deaths .....						
Fatality per cent.....						
<b>IMMUNIZATION</b>						
By department inspectors.....						
Number immunized.....						
Number contracting disease between 2 and 20 days .....						
<b>VISITS</b>						
Total visits to diphtheria cases.....						
Average visits per case.....						
Total injections.....						

\*Quarantine is maintained and disinfections are ordered by the division of contagious diseases

†With antitoxin furnished free by the department of health

‡Cases dying within 24 hours after injection

Table 62

## TYPHOID AND CEREBRO-SPINAL MENINGITIS:

## GENERAL FIGURES, 1897-1906

New York City: cases reported, case rate, and death rate

	Cases reported	Cases per 1,000 of population	Deaths	Deaths per 1,000 of population
<b>Typhoid</b>				
1897 . . . . .				
1898 . . . . .				
1899 . . . . .				
1900 . . . . .				
1901 . . . . .				
1902 . . . . .				
1903 . . . . .				
1904 . . . . .				
1905 . . . . .				
1906 . . . . .				
<b>Cerebro-spinal meningitis</b>				
1897 . . . . .				
1898 . . . . .				
1899 . . . . .				
1900 . . . . .				
1901 . . . . .				
1902 . . . . .				
1903 . . . . .				
1904 . . . . .				
1905 . . . . .				
1906 . . . . .				

Table 63

## TYPHOID FEVER: GENERAL FIGURES AND INSPECTION, 1906

	New York	Manhattan	Bronx	Brooklyn	Queens	Richmond
Cases reported .....						
<b>Cases per 1,000 of population</b> .....						
Deaths from typhoid.....						
<b>Case fatality, per cent.</b> .....						
<b>Deaths per 1,000 of population</b> .....						
Cases not inspected on account of detailed report by attending physician.....						
Cases inspected .....						
Total .....						
Visits to cases.....						
Disinfections of goods ordered.....						

Table 64

CEREBRO-SPINAL MENINGITIS: GENERAL FIGURES AND INSPECTION, 1906

	New York	Manhattan	Bronx	Brooklyn	Queens	Richmond
Cases reported.....						
<b>Cases per 1,000 of population . . . . .</b>						
Deaths .....						
Case fatality, per cent.....						
<b>Deaths per 1,000 of population . . . . .</b>						
Cases visited .....						
Visits to cases.....						
Disinfections of premises ordered.....						
Disinfections of goods ordered.....						

Table 65

SUMMARY OF INSPECTIONS, VISITS, ETC., DIVISION OF COMMUNICABLE  
DISEASES, 1905-1906

[illegible]

Table 66

DIAGNOSIS LABORATORY: SPECIMENS EXAMINED AND  
RESULTS OF EXAMINATION, 1906

	New York	Man- hattan	Bronx	Brook- lyn	Queens	Rich- mond
<b>DIPHTHERIA</b>						
Bacteriological examinations for diagnosis.....						
Showing Klebs-Loeffer bacilli.....						
Not showing Klebs-Loeffer bacilli.....						
Indecisive .....						
Later cultures .....						
Other cultures .....						
Total cultures .....						
<b>TUBERCULOSIS, SPUTUM</b>						
Specimens examined .....						
Showing tubercle bacilli .....						
Showing no tubercle bacilli .....						
<b>TYPHOID</b>						
<i>Widal Reaction</i>						
Specimens of blood examined.....						
Showing reaction .....						
Showing no reaction .....						
Indecisive .....						
<i>Diazo Reaction</i>						
Specimens examined .....						
Showing diazo reaction.....						
Showing no diazo reaction.....						
Showing doubtful reaction.....						
<b>MALARIA</b>						
Specimens examined .....						
Showing malaria plas .....						
Showing no malaria plas.....						
<b>MISCELLANEOUS</b>						
Average number of culture stations*.....						
Visits to collect specimens.....						
Culture tubes prepared.....						
Swabs made .....						
Laboratory preparations made.....						

\*Average of those in operation on the first of each month

Table 67

DIAGNOSIS LABORATORY: SPECIMENS SUBMITTED  
FOR EXAMINATION, 1906

	Number of specimens submitted for diagnosis by	
	Department of health	Private physicians
Diphtheria . . . . .		
Tuberculosis . . . . .		
Typhoid . . . . .		
Widal reaction . . . . .		
Diazo reaction . . . . .		
Malaria . . . . .		
Total . . . . .		
Percentage . . . . .		

### HOSPITALS FOR GENERAL INFECTIOUS DISEASES

Objects	(a) Preventive. To remove cases of contagious diseases from the imperfect quarantine of a home to the relatively perfect isolation of a hospital.
	(b) Curative. To provide treatment.
Activities	The proper treatment and disposition of the cases received.
Relation of Activities to Object	The contribution of a contagious disease hospital to prevention can be measured only when some change of policy occurs in committing cases to the hospitals. For example, if the scarlet fever pavilion at Willard Parker hospital is enabled to receive a much larger percentage than formerly of the cases occurring in Manhattan, it will be fair to expect the prevalence and death rate of that disease to fall off perceptibly in the next five years.
	Improved methods of treatment, such as that of diphtheria by antitoxin, show in a decreased case fatality over a series of years.

Table 68

Table 68 indicates what proportion of the total cases of contagious diseases reported the department cares for in its hospitals. The opening of a new ward or pavilion is reflected in the increased proportion of cases cared for, and gives a basis for judging the contribution of the hospitals to the prevention of disease.

Table 68  
HOSPITAL TREATMENT OF CONTAGIOUS DISEASES, 1902-1906  
Cases treated and percentage of total cases reported

	Number of cases reported		Number treated in hospital		Percentage treated in hospital	
	New York	Each of five boroughs	New York	Each of five boroughs	New York	Each of five boroughs
Diphtheria	1902 . . . . .					
1903 . . . . .						
1904 . . . . .						
1905 . . . . .						
1906 . . . . .						
Scarlet fever	1902 . . . . .					
1903 . . . . .						
1904 . . . . .						
1905 . . . . .						
1906 . . . . .						
Small-pox	1902 . . . . .					
1903 . . . . .						
1904 . . . . .						
1905 . . . . .						
1906 . . . . .						
Chicken-pox	1902 . . . . .					
1903 . . . . .						
1904 . . . . .						
1905 . . . . .						
1906 . . . . .						
Measles	1902 . . . . .					
1903 . . . . .						
1904 . . . . .						
1905 . . . . .						
1906 . . . . .						
German measles	1902 . . . . .					
1903 . . . . .						
1904 . . . . .						
1905 . . . . .						
1906 . . . . .						

## Tables 69-84

Table 69 summarizes Tables 70-74, which are practically the present forms of statement of patients received and discharged.

Tables 75-79 show the high and low extremes of demand for hospital care; also the average number of patients for each of five hospitals.

Tables 80-83 give for each hospital (except Otisville, for which it would be without significance) the case fatality by age periods, according to the duration of the disease previous to admission. It may be expected that the figures will prove a lower fatality in cases of early admission.

Table 84 is intended to show to what extent the hospitals may be responsible for infections among patients after admission.

Table 69

ALL DEPARTMENT OF HEALTH HOSPITALS: PATIENTS  
DURING 1906

	Remaining Jan. 1, 1906	Admitted	Total treated	Discharged	Died	Remaining Dec. 31, 1906
Diphtheria .....						
Scarlet fever .....						
Small-pox .....						
Chicken-pox .....						
Measles .....						
Mumps .....						
Tuberculosis .....						
German measles .....						
Whooping cough .....						
Diphtheria and scarlet fever.....						
Diphtheria and chicken-pox.....						
Diphtheria and measles.....						
Diphtheria and German measles.....						
Diphtheria and whooping cough.....						
Diphtheria, scarlet fever, and measles.....						
Scarlet fever and whooping cough.....						
Measles and chicken-pox.....						
Measles and whooping cough.....						
Gonorrheal vaginitis complicating other diseases.						
Trachoma .....						
Total cases .....						
For observation .....						
Persons accompanying patient .....						

Tables 70-74\*

.....HOSPITAL†: PATIENTS DURING 1906							
	Remain- ing Jan. 1, 1906	Admitted		Total treated	Dis- charged	Died	Trans- ferred to
		New	Trans- ferred from				
Diphtheria . . . . .							
Scarlet fever . . . . .							
Small-pox . . . . .							
Chicken-pox . . . . .							
Measles . . . . .							
Mumps . . . . .							
Tuberculosis . . . . .							
German measles . . . . .							
Whooping cough . . . . .							
Diphtheria and scarlet fever . . . . .							
Diphtheria and chicken-pox . . . . .							
Diphtheria and measles . . . . .							
Diphtheria and German measles . . . . .							
Diphtheria and whooping cough . . . . .							
Diphtheria, scarlet fever, and measles . . . . .							
Scarlet fever and whooping cough . . . . .							
Measles and chicken-pox . . . . .							
Measles and whooping cough . . . . .							
Gonorrheal vaginitis complicating other diseases.....							
Total cases . . . . .							
For observation . . . . .							
Accompanying . . . . .							

\*One each for Reception, Willard Parker, Riverside, Kingston Avenue, and Otisville  
† Only the diseases treated in each hospital being given in the first column

Tables 75-79\*

.....HOSPITAL: SERVICE RENDERED, 1906†						
	Patients	Patient days	Average days per patient	Largest number patients at one time	Smallest number patients at one time	Average patients per day
Diphtheria . . . . .						
Scarlet fever . . . . .						
Small-pox . . . . .						
Chicken-pox . . . . .						
Measles . . . . .						
German measles . . . . .						
Whooping cough . . . . .						
Mumps . . . . .						
Tuberculosis . . . . .						
Mixed infections . . . . .						
Total . . . . .						
For observation . . . . .						
Accompanying . . . . .						

\*One each for Reception, Willard Parker, Riverside, Kingston Avenue, and Otisville  
† Only the disease treated in each hospital being given in the first column

Tables 80-83\*

.....HOSPITAL: CASE FATALITY, 1906									
Days of disease elapsed previous to admission	Cases terminated,* those dying under 48 hours deducted				Deaths, those dying under 48 hours deducted			Case fatality, per cent.	
	Under 2 days	2-5 days	Over 5 days	Total	Under 2 days	2-5 days	Over 5 days	Under 2 days	Over 5 days
Diphtheria . . . . .									
Under 2 years . . . . .									
2-4 years . . . . .									
5-14 years . . . . .									
Over 15 years . . . . .									
Scarlet fever . . . . .									
Under 2 years . . . . .									
2-4 years . . . . .									
5-14 years . . . . .									
Over 15 years . . . . .									
Small-pox . . . . .									
Under 2 years . . . . .									
2-4 years . . . . .									
5-14 years . . . . .									
Over 15 years . . . . .									
Measles . . . . .									
Under 2 years . . . . .									
2-4 years . . . . .									
5-14 years . . . . .									
Over 15 years . . . . .									
Diphtheria with complications† . . . . .									
Under 2 years . . . . .									
2-4 years . . . . .									
5-14 years . . . . .									
Over 15 years . . . . .									
Scarlet fever with complications† . . . . .									
Under 2 years . . . . .									
2-4 years . . . . .									
5-14 years . . . . .									
Over 15 years . . . . .									
Measles with complications† . . . . .									
Under 2 years . . . . .									
2-4 years . . . . .									
5-14 years . . . . .									
Over 15 years . . . . .									

\*One each for Reception, Willard Parker, Riverside, and Kingston Avenue  
† Cases dying or discharged    †Complications of other infectious diseases

Table 84

## CASES OF INFECTION WITHIN HOSPITALS, 1906

	Reception	Willard Parker	Riverside	Kingston Avenue
Cases of measles developing more than 14 days after admission .....				
Cases of scarlet fever developing more than 10 days after admission .....				

Table 85

OTISVILLE SANATORIUM: PATIENTS TREATED AND CONDITION WHEN  
DISCHARGED\*, 1906

	Total cases treated in 1906	Discharged				Deaths	Under treat- ment Dec. 31
		Appar- ently cured	Arrested	Im- proved	Progres- sive		
<b>NUMBER</b>							
Incipient .....							
Moderately advanced .....							
Far advanced .....							
<b>Percentage</b>							
Incipient .....	100						
Moderately advanced .....	100						
Far advanced .....	100						

\* The classification as to stage of disease, etc., is that adopted by the National Association for the Study and Prevention of Tuberculosis

Table 86

## OTISVILLE SANATORIUM: DURATION OF PATIENTS' STAY, 1906

	Number	Per cent.
Total patients discharged, 1906.....		
Length of stay.....		
Under 1 month.....		
Over 1 month and under 3 months.....		
Over 3 months and under 6 months.....		
Over 6 months.....		

Table 87

OTISVILLE SANATORIUM: PLACES TO WHICH PATIENTS  
DISCHARGED, 1906

	Number	Per cent.
Total patients discharged, 1906.....		
Patients discharged to their homes.....		
" " " other sanitaria.....		
" " " work at Otisville.....		

### TRACHOMA HOSPITAL AND DISPENSARIES

**Object** To cure cases of trachoma and other contagious eye diseases, chiefly among school children, and thereby to diminish their prevalence.

**Activities** Furnishing treatment (operative, post-operative, and non-operative) to the cases referred to it.

**Relation of Activities to Object** The contribution of the hospital toward diminishing the prevalence of trachoma and other contagious eye diseases among school children cannot be sharply distinguished from that of the medical inspectors of schools and school nurses in discovering cases and urging treatment. The prevalence of trachoma and other contagious eye diseases given in Table 36 should show by its gradual decrease in a series of years the success of the combined work of the hospital, medical inspectors, and nurses. The direct cures of the hospital can be indicated by the percentage discharged apparently cured (Table 88), and by a special subsequent investigation of these cases to discover the percentage of permanent cures (Table 89).

Table 88

### TRACHOMA HOSPITAL AND DISPENSARIES: NUMBER AND PERCENTAGE OF APPARENT CURES, 1902-1906

	1902	1903	1904	1905	1906
<b>CASES TREATED</b>					
Trachoma: operative.....					
Trachoma: non-operative.....					
Other contagious eye diseases.....					
<b>DISCHARGED APPARENTLY CURED</b>					
Trachoma: operative.....					
Trachoma: non-operative.....					
Other contagious eye diseases.....					
<b>Percentage of those treated discharged apparently cured</b>					
Trachoma: operative.....					
Trachoma: non-operative.....					
Other contagious eye diseases.....					

Table 89

### TRACHOMA HOSPITAL AND DISPENSARIES: SPECIAL ANNUAL INVESTIGATION

Number and percentage of permanent cures among patients discharged during 1906: investigation made (dates of duration)

	Trachoma	
	Operative	Non-operative
Discharged apparently cured.....		
Investigated .....		
Found .....		
No relapse.....		
<b>Percentage no relapse to those found . . .</b>		
Same percentage, previous investigation.....		

Table 90

TRACHOMA HOSPITAL AND DISPENSARIES: TREATMENT AND  
DISPOSITION OF CASES, 1906

	Trachoma		Other conta- gious eye diseases	Total
	By opera- tion*	Non-opera- tive only		
CASES TREATED				
Under treatment January 1, 1906.....				
New cases treated in 1906.....				
Total treated in 1906.....				
DISPOSITION				
Discharged apparently cured†.....				†
Discontinuing before cure‡.....				‡
Under treatment December 31, 1906.....				
Total .....				
Percentage of those treated discharged apparently cured.....				

\*With post-operative treatment following

†It is suggested that no totals be entered for these items, since by combining several unlike quantities a false conclusion might be drawn

‡A patient is considered as "discontinuing" when he does not appear for 2 months

Table 91

TRACHOMA HOSPITAL AND DISPENSARIES: EXAMINATIONS,  
DIAGNOSES, AND TREATMENTS, 1906

	Hospital	Dispensaries	Total
<b>EXAMINATIONS</b>			
Examinations for diagnosis.....			
<b>DIAGNOSES</b>			
Cases rejected as non-contagious.....			
Cases found: trachoma.....			
Cases found: other contagious eye diseases.....			
Total .....			
<b>TREATMENTS</b>			
Trachoma: operations.....			
Trachoma: post-operative.....			
Trachoma: non-operative.....			
Other contagious eye diseases.....			
Total .....			
Largest number in one day.....			
Average number per day.....			

## RESEARCH LABORATORY

**Object** With the exception of the administration of Pasteur treatment, the research laboratory conducts a subsidiary line of work, and therefore has no direct health object.

- Activities**
- (a) Special bacteriological investigations.
  - (b) Production of antitoxic serums and diagnostic toxins.
  - (c) Bacteriological examination of specimens.
  - (d) Administration of Pasteur treatment.

**Relation of Activities to Object** The result of the work under (a) is shown in the special reports of investigations. For (b) and (c) there is a formal report of amounts produced and of specimens examined (Tables 92-93). (d) In judging of the Pasteur treatment, as of the department's immunization by antitoxin injection, it is of course impossible to know how many persons would have contracted the disease if treatment had not been administered. All that can be stated is the number of persons treated and the number developing hydrophobia (Table 94).

Table 92

## RESEARCH LABORATORY: PRODUCTION OF ANTITOXIC SERUMS AND DIAGNOSTIC TOXINS, 1905-1906

	1905	1906
Units of diphtheria antitoxin produced (in thousands) . . . . .		
Units of diphtheria antitoxin bottled for distribution (in thousands) . . . . .		
Cubic centimeters of diphtheria toxin produced . . . . .		
Units of tetanus antitoxin produced (in thousands) . . . . .		
Units of tetanus antitoxin bottled for distribution (in thousands) . . . . .		
Cubic centimeters of tetanus toxin produced . . . . .		
Cubic centimeters of mallein produced . . . . .		
Cubic centimeters of mallein bottled for distribution . . . . .		
Cubic centimeters of tuberculin produced . . . . .		
Cubic centimeters of tuberculin bottled for distribution . . . . .		
Samples of toxins tested . . . . .		
Samples of antitoxin serum tested . . . . .		

Table 93

## RESEARCH LABORATORY: BACTERIOLOGICAL EXAMINATION OF SPECIMENS, 1905-1906

	1905	1906
Bacteriological examinations of water . . . . .		
Bacteriological examinations of milk . . . . .		
Bacteriological examinations for virulence of diphtheria bacilli . . . . .		

Table 94

## RESEARCH LABORATORY: PASTEUR TREATMENT, 1905-1906

	1905	1906
Patients under treatment Jan. 1 . . . . .		
Patients under observation Jan. 1 * . . . . .		
New patients treated during year . . . . .		
Living in New York City † . . . . .		
Living outside of New York City † . . . . .		
Attending laboratory for treatment . . . . .		
Receiving vaccine by mail . . . . .		
Total . . . . .		
Patients developing hydrophobia . . . . .		
Patients not developing hydrophobia . . . . .		
Patients under treatment Dec. 31 . . . . .		
Patients under observation Dec. 31 . . . . .		
Total . . . . .		
Number of injections in patients . . . . .		
Animals diagnosed for rabies . . . . .		
Cases . . . . .		
Not cases . . . . .		

\* Patients kept under observation for one month after close of treatment

† Free  
Paying

## CHEMICAL LABORATORY

Object As the chemical laboratory is a subsidiary line of work, no direct health object can be stated.

Activities Analysis of and report upon the specimens submitted to it.

Relation of Activities to Object As there is no direct health object, nothing remains but to present a statement of the specimens submitted, so classified as to show by whom submitted (Table 95) and the results of analysis (Table 96). A statement is therefore added of the number of half days consumed in attendance at court for the purpose of testifying (Table 97).

Table 95

## CHEMICAL LABORATORY: SPECIMENS SUBMITTED AND ANALYZED, 1906

	1905	1906
Total number of specimens analyzed		
Total number pieces of apparatus tested		
Total number reports forwarded and filed		
Specimens submitted . . . . .		
By department of health		
Acetanelid . . . . .		
Air . . . . .		
Etc . . . . .		
Total . . . . .		
By police department		
Beer . . . . .		
Opium . . . . .		
Chloral . . . . .		
Etc . . . . .		
Total . . . . .		
By department of water supply . . .		
Water . . . . .		
By department of street cleaning		
Garbage . . . . .		
Ash . . . . .		
Etc . . . . .		
Total . . . . .		
By Bellevue hospital . . . . .		
By department of finance . . . . .		
By department of correction . . . .		
By coroner . . . . .		
By district attorney . . . . .		
By county medical society . . . . .		

Table 96

## CHEMICAL LABORATORY: RESULTS OF ANALYSES, 1906

The results of analyses may be given as they are, at length, in the annual report for 1905

Table 97

CHEMICAL LABORATORY: NUMBER OF HALF DAYS OF ATTENDANCE  
AT COURT, 1905-1906

	1905	1906
January . . . . .		
February . . . . .		
March . . . . .		
April . . . . .		
May . . . . .		
June . . . . .		
July . . . . .		
August . . . . .		
September . . . . .		
October . . . . .		
November . . . . .		
December . . . . .		
Total . . . . .		

## VACCINE LABORATORY

**Object** Like the other laboratories, the vaccine laboratory is a subsidiary line of work and has no direct health object.

**Activities** (a) Production of vaccine virus.  
(b) Experimental testing of vaccine virus produced.

(c) Issuance, mainly to the chief clerk and to hospitals, of the virus as prepared for use.

**Relation of Activities to Object** A formal statement is given of the amount of virus produced, tested, and issued.

Table 98

VACCINE LABORATORY: VIRUS PRODUCED, TESTED, AND ISSUED  
1905-1906

	1905	1906
<b>PRODUCTION OF VACCINE VIRUS</b>		
Gram collected . . . . .		
Cubic centimeters of liquid virus prepared . . . . .		
Spades charged with humanized virus . . . . .		
<b>EXPERIMENTAL TESTING OF VIRUS</b>		
Primary vaccinations . . . . .		
Secondary vaccinations . . . . .		
Visits . . . . .		
<b>MISCELLANEOUS</b>		
Specimens of virus tested bacteriologically . . . . .		
Inspections of virus previously sold . . . . .		
Animals vaccinated . . . . .		
Animals collected from . . . . .		
Autopsies on animals . . . . .		
White mice injected . . . . .		
Other animals experimented upon		
Mailing blocks prepared . . . . .		

	To chief clerk	To hospitals	To miscellaneous	In exchange for old virus	Total 1906	Total 1905
<b>VACCINE VIRUS ISSUED</b>						
Capillary tubes . . . . .						
Small vials . . . . .						
Large vials . . . . .						

## REMOVAL OF DEAD ANIMALS, OFFAL, AND NIGHT SOIL

The removal of dead animals, offal, and night soil is done by contract, the contracts now in force being for five years. When an order to remove a carcass is forwarded to the contractors, the department, it is stated, keeps pressure upon the contractor till he reports the order executed. Relying upon the likelihood of other complaints from citizens if the order remains unexecuted, the department feels reasonably assured that the orders to remove are actually carried out.

As to the other question, whether the removals (or trips for the purpose of removal) agree in number with the removals ordered, no attempt is made to determine. Carcasses may be reported for removal to the contractors, either through the department headquarters or directly. The telephone number of the offal dock is in the telephone directory and there is nothing to prevent any citizen from communicating directly with the contractors, without the knowledge of the department. The only source of information, therefore, as to the amount of service rendered, is in the uncontrolled reports of the contractors.

It is urged that the only way of furnishing data which would serve as an approximately reliable basis for bids, is to require all removal orders to go through the department office and to be there recorded, with the names and addresses of the citizens making the complaints, or of the inspectors ordering removal. The contents of the scows maintained for the reception of night soil can be inspected and estimated before each trip. These records, when summarized and published annually, would provide facts on which a possible future bidder could base his estimate. (Table 99).

Table 99

## DEAD ANIMALS, OFFAL, AND NIGHT SOIL, ORDERED REMOVED, 1906

	New York	Manhattan	Bronx	Brooklyn	Queens	Richmond
<b>CARCASSES ORDERED REMOVED</b>						
Large animals						
Horses } .....						
Mules } .....						
Donkeys } .....						
Colts } .....						
Ponies } .....						
Cattle .....						
Other large animals .....						
Total large animals .....						
Small animals						
Calves .....						
Sheep } .....						
Goats } .....						
Hogs } .....						
Pigs } .....						
Cats and dogs from streets .....						
Cats and dogs from public pound .....						
Other small animals .....						
Total small animals .....						
Total all animals .....						
Greatest number any one week .....						
Large animals .....						
Small " .....						
Smallest number any one week .....						
Large animals .....						
Small " .....						
<b>QUANTITY OF MEAT, OFFAL, ETC., ORDERED REMOVED</b>						
Pounds of meat .....						
" " poultry .....						
" " rabbits .....						
" " fish .....						
" " offal .....						
Total pounds .....						
Number of removals ordered of meat, offal, etc. ....						
Average pounds per removal .....						
Greatest number of pounds any one week ..						
Smallest number of pounds any one week ..						
<b>QUANTITY OF NIGHT SOIL REMOVED</b>						
Cubic yards of night soil removed .....						

*Exhibit 5*  
SUGGESTION FOR PERIODIC REPORT OF EXPENDITURE, BASED UPON SEGREGATION LEDGER  
DEPARTMENT OF HEALTH, NEW YORK CITY

FINANCIAL SUMMARY FOR THE				190	
ITEM	Man- hattan	Bronx	Brooklyn	Queens	Rich- mond
<b>GENERAL ADMINISTRATION</b>					
Commissioner . . . . .					
Secretary board of health . . . . .					
Secretary's office . . . . .					
Chief clerk's office . . . . .					
General superintendent . . . . .					
Sanitary superintendent . . . . .					
Sanitary superintendents office . . . . .					
Office chief of communicable diseases . . . . .					
Superintendent of hospitals . . . . .					
Registrar of records . . . . .					
Assistant corporation counsel . . . . .					
Total general administration . . . . .					
<b>BOROUGH OFFICES</b>					
<b>ASSISTANT CHIEF CLERK</b>					
Executive and office force . . . . .					
Care and maintenance of buildings . . . . .					
Undistributed expenditure . . . . .					
<b>ASSISTANT SANITARY SUPERINTENDENT</b>					
Executive and office force . . . . .					
Division of inspections . . . . .					
Executive and office force . . . . .					
General sanitary inspection . . . . .					
Milk inspection . . . . .					
Food inspection . . . . .					
Division of contagious diseases . . . . .					
Executive and office force . . . . .					
District medical inspection . . . . .					
Animal inspection . . . . .					
School inspection . . . . .					
Summer corps . . . . .					
Disinfecting stations . . . . .					
Division of communicable diseases . . . . .					
Executive and office force . . . . .					
District medical inspection . . . . .					
Clinics . . . . .					
Miscellaneous . . . . .					
Removal of night soil, etc. . . . .					
Support of ambulance service . . . . .					
Assessment of nuisances . . . . .					
<b>ASSISTANT REGISTRAR OF RECORDS</b>					
Executive and office force . . . . .					
Total Borough offices . . . . .					

Exhibit 5

Exhibit 5—Continued

*Exhibit 5—Continued*  
SUGGESTION FOR PERIODIC REPORT OF EXPENDITURE, BASED UPON SEGREGATION LEDGER  
DEPARTMENT OF HEALTH, NEW YORK CITY

FINANCIAL SUMMARY FOR THE				190	
ITEM	Amt. for Period	Amount to date	Appro.	Balance	
<b>LABORATORIES</b>					
Research . . . . .					
Expenditure . . . . .					
Income from sale of products . . . . .					
Chemical laboratory . . . . .					
Vaccine laboratory . . . . .					
Drug laboratory . . . . .					
Total laboratories . . . . .					
<b>HOSPITALS</b>					
Riverside . . . . .					
Willard Parker and Reception . . . . .					
Kingston Avenue . . . . .					
Otisville . . . . .					
Total hospitals . . . . .					
<b>CORPORATE STOCK</b>					
GRAND TOTAL . . . . .					
<b>PENSION FUND—RECEIPTS</b>					

**PROPOSED DETAILED CLASSIFICATION OF EXPENDITURES  
MADE BY THE DEPARTMENT OF HEALTH TO BE  
SHOWN BY THE SEGREGATION LEDGER**

**I. GENERAL ADMINISTRATION**

**I. COMMISSIONER**

*Salaries and Wages*

Administrative Head  
Assistants  
Clerks  
Stenographers  
Office Boys  
Messengers  
Drivers

*Office and Other Expenses*

Expressage  
Books and Periodicals  
Furniture and Fittings  
Supplies  
Horse and Carriage Hire  
Auto Service  
Transportation  
Traveling Expenses

**2. SECRETARY BOARD OF HEALTH**

*Office of Secretary*

Salaries and Wages  
Office and Other Expenses } See outline for commissioner

*Office of Chief Clerk*

Office Force  
Salaries and Wages  
Office and Other Expenses } See outline for commissioner

Construction and Repairs

Salaries and Wages  
Inspector in Charge  
Inspectors

Other Expenses

Transportation  
Drawing Materials  
Supplies

Sale of Anti-toxin and Virus

Salaries and Wages  
Clerks  
Collectors

Other Expenses

Carfare  
Expressage  
Supplies

**EXHIBIT 6b**

**3. GENERAL MEDICAL OFFICER**

*Salaries and Wages*

Office and Other Expenses } See outline for commissioner

**4. SANITARY SUPERINTENDENT**

*Office of Sanitary Superintendent*

Salaries and Wages  
Office and Other Expenses } See outline for commissioner

*Office Chief of Communicable Diseases*

Salaries and Wages  
Office and Other Expenses } See outline for commissioner

*Office of Superintendent of Hospitals*

Salaries and Wages  
Office and Other Expenses } See outline for commissioner

**5. REGISTRAR OF RECORDS**

Salaries and Wages  
Office and Other Expenses } See outline for commissioner

**6. CORPORATION COUNSEL**

Salaries and Wages  
Office and Other Expenses } See outline for commissioner

**II. BOROUGH OFFICES** (The below given outline for each office will be used for the corresponding office in each borough)

**I. ASSISTANT CHIEF CLERK**

*Office force*

Salaries and Wages  
Office and Other Expenses } See outline for commissioner

*Care and Maintenance of Buildings*

## Salaries and Wages

Janitor

Engineer

Watchman

Laborers and Cleaners

## Repairs

Building

Plumbing

Elevator

## Painting and Kalsomining

## Supplies

Coal

Engineers' Supplies

Janitors' Supplies

## EXHIBIT 6c

*Undistributed Expenditure*

Postage

Telephone

Switch Board Operators

## 2. ASSISTANT SANITARY SUPERINTENDENT

*Executive Division*

Salaries and Wages

Office and Other Expenses

} See outline for commissioner

*Division of Inspections*

## Executive Work

Salaries and Wages

Office and Other Expenses

} See outline for commissioner

## General Sanitary Inspection

Salaries

Incidentals

Carfare

Telephone

Supplies

## Milk Inspection

City

Salaries

Incidentals

Carfare

Telephone

Supplies

## Country

Salaries

Incidentals

Carfare

Telephone

Supplies

## Food Inspection

Salaries

Incidentals

Carfare

Telephone

Supplies

*Division of Contagious Diseases*

## Executive Work

Salaries and Wages

Office and Other Expenses

} See outline for commissioner

## District Medical Inspection

## Inspectors

Salaries

Incidentals

Carfare

Telephone

Supplies

## Nurses

Salaries

Incidentals

Carfare

Telephone

Supplies

## EXHIBIT 6d

## Animal Inspection

Salaries

Incidentals

Carfare

Telephone

Supplies

School Inspection  
 Inspectors  
   Salaries  
   Incidentals  
     Carfare  
     Telephone  
     Supplies  
 Nurses  
   Salaries  
   Incidentals  
     Carfare  
     Telephone  
     Supplies  
 Summer Corps  
 Inspectors  
   Salaries  
   Incidentals  
     Carfare  
     Telephone  
     Supplies  
 Nurses  
   Salaries  
   Incidentals  
     Carfare  
     Telephone  
     Supplies  
 Disinfecting Stations  
 Cost of Operation  
   Salaries and Wages  
   Other Expenses  
     Chemicals  
     Fuel  
 Field Work  
   Salaries and Wages  
   Other Expenses  
     Chemicals  
     Care of Horses  
     Repairs to Wagons and Harness  
     Supplies

Repairs and Betterments to Plant

Miscellaneous

Removal of Night Soil, etc.  
 Support of Ambulance Service  
 Abatement of Nuisances

EXHIBIT 6e

3. DIVISION OF COMMUNICABLE DISEASES

*Executive Work*

Salaries and Wages  
 Office and Other Expenses } See outline for commissioner

*District Medical Inspection*

Inspectors

Salaries  
 Incidentals  
   Carfare  
   Telephone  
   Supplies

Nurses

Salaries  
 Incidentals  
   Carfare  
   Telephone  
   Supplies

*Clinics*

Salaries and Wages  
 Nurses  
   Attending Physicians  
   Medical Inspectors  
   Hospital Clerks  
   Laborers  
 Other Expenses  
   Carfare  
   Telephone  
 Drugs  
 Supplies

*Diagnosis Laboratory*

## Salaries and Wages

Assistant Director

Bacteriologist

Bacteriological Diagnostician

Laboratory Assistants

Clerks

Laborers and Cleaners

## Laboratory Expense

Culture Tubes

Slides

Wooden Boxes

Sputum Jars

Apparatus

## 4. ASSISTANT REGISTRAR OF RECORDS

## Salaries and Wages

## Office and Other Expenses

{ See outline for commissioner

## EXHIBIT 6f

## III. LABORATORIES

## I. RESEARCH LABORATORY

*Administration and Research*

## Salaries and Wages

Administrative Head

Research Assistants

Cleaners and Laborers

## Other Expenses

Transportation

Traveling Expenses

Expressage

Books and Periodicals

Supplies

*Production of Antitoxin*

## Salaries and Wages

## Other Expenses

Board of Horses

Veterinarian's Fees

Guinea Pigs, Cost of

Meat and Eggs

Animal Food

Apparatus

Supplies

*Production Pasteur Virus and Treatment of Disease*

## Salaries and Wages

## Other Expenses

Cost of Rabbits

Animal Food

Apparatus

Supplies

*Milk Analysis*

## Salaries and Wages

## Other Expenses

Bottles

Petri Dishes

*Diagnosis of Glanders*

## Salaries and Wages

## 2. CHEMICAL LABORATORY

*Administration*

## Salaries and Wages

Administrative Head

Assistant

Cleaners

## Other Expenses.....

{ Transportation

{ Traveling Expense

{ Books and Periodicals

{ Expressage

{ Supplies

*Water Analysis*

## Salaries and Wages

## Other Expenses

Apparatus

Chemicals

Supplies

*Milk Analysis*

## Salaries and Wages

## Other Expenses

Apparatus

Chemicals

Supplies

## EXHIBIT 6g

*Food Analysis*

Salaries and Wages  
Other Expenses  
Apparatus  
Chemicals  
Supplies

*Miscellaneous Work*

Salaries and Wages  
Other Expenses  
Apparatus  
Chemicals  
Supplies

## 3. VACCINE LABORATORY

*Administration*

Salaries and Wages  
Administrative Heads  
Assistants  
Cleaners

*Other Expenses*

Transportation  
Traveling Expense  
Expressage  
Books and Periodicals  
Supplies

*Cost of Production of Vaccine*

Salaries and Wages  
Laboratory Assistants  
Inspectors  
Laborers and Cleaners

*Other Expenses*

Cost of Calves  
Cost of Food for Calves  
Instruments  
Supplies

*Repairs and Improvements*

## 4. DRUG LABORATORY

## Salaries and Wages

Chemists  
Laboratory Assistants  
Laborers and Cleaners

*Other Expenses*

Expressage  
Furniture and Fittings  
Apparatus  
Repairs  
Waste

Drugs, and Supplies for Distribution

## IV. HOSPITALS

## EXHIBIT 6h

## V. DEPARTMENTAL STABLES

## Salaries and Wages

Foreman  
Assistants (not including drivers)

## Stable Supplies

Corn  
Oats  
Hay  
\* \* \*  
\* \* \*

Repairs and Betterments

## VI. CORPORATE STOCK

184 F-1907

Perfect Score 100%  
Score Allowed.....

File No. ....

**DEPARTMENT OF HEALTH**

CITY OF NEW YORK

**Dairy Inspection****Division of Inspections**

- 1 Inspection No. .... Time ..... A. P. M. Date ..... 190  
 2 Tenant ..... P. O. Address .....  
 3 Township ..... County ..... State .....  
 4 Owner ..... Party Interviewed .....  
 5 Milk delivered at ..... Since .....  
 Formerly delivered at .....  
 6 Creamery on ..... R. R. .... Branch ..... Miles to N. Y. ....  
 7 Creamery operated by ..... Address .....  
 8 Distance of farm from creamery ..... Occupied farm since .....  
 9 No. of Cows ..... Breed ..... No. Milking .....  
 Quarts milk produced .....  
 10 All persons in the households of those engaged in producing or handling milk  
 are ..... free from all infectious disease .....  
 11 Date and nature of last case on farm .....  
 12 A sample of the water supply on this farm taken for analysis .....  
 190 ..... and found to be .....  
 13 Size of cow barn, length ..... feet. Width ..... feet. Height of ceiling .....

	PERFECT	ALLOW
<b>STABLE</b>		
14 COW STABLE is ..... located on elevated ground with no stagnant water, hog-pen, or privy within 100 feet .....	1	.....
15 FLOORS are ..... constructed of concrete or some non-absorbent material .....	1	.....
16 Floors are ..... properly graded and water-tight .....	2	.....
17 DROPS are ..... constructed of concrete, stone or some non-absorbent material .....	2	.....
18 Drops are ..... water-tight .....	2	.....
19 FEEDING TROUGHS, platforms or cribs are ..... well lighted and clean .....	1	.....
20 CEILING is constructed of ..... and is ..... tight and dust proof .....	2	.....
21 Ceiling is ..... free from hanging straw, dirt or cobwebs .....	1	.....
22 NUMBER OF WINDOWS ..... total square feet ..... which is ..... sufficient .....	2	.....
23 Window panes are ..... washed and kept clean .....	1	.....
24 VENTILATION consists of ..... which is sufficient 3, fair 1, insufficient 0 .....	3	.....
25 AIR SPACE is ..... cubic feet per cow which is ..... sufficient (600 and over-3) (500 to 600-2) (400 to 500-1) (under 400-0) .....	3	.....
26 INTERIOR of stable painted or whitewashed on ..... which is satisfactory 2, fair 1, never 0 .....	2	.....
27 WALLS AND LEDGES are ..... free from dirt, dust, manure or cobwebs .....	2	.....
28 FLOORS AND PREMISES are ..... free from dirt, rubbish or decayed animal or vegetable matter .....	1	.....
29 COW BEDS are ..... clean .....	1	.....
30 LIVE STOCK, other than cows, are ..... excluded from rooms in which milch cows are kept .....	2	.....
31 There is ..... direct opening from barn into silo or grain pit .....	1	.....
32 BEDDING used is ..... clean, dry and absorbent .....	1	.....
33 SEPARATE BUILDING is ..... provided for cows when sick .....	1	.....
34 Separate quarters are ..... provided for cows when calving .....	1	.....
35 MANURE is ..... removed daily to at least 200 feet from the barn (..... ft.) .....	2	.....
36 Manure pile is ..... so located that the cows cannot get at it .....	1	.....

	PERFECT	ALLOW
37 LIQUID MATTER is ..... absorbed and removed daily and ..... allowed to overflow and saturate ground under or around cow barn .....	2	.....
38 RUNNING WATER supply for washing stables is ..... located within building .....	1	.....
39 DAIRY RULES of the Department of Health are ..... posted .....	1	.....
<b>COW YARD</b>		
40 COW YARD is ..... properly graded and drained .....	1	.....
41 Cow yard is ..... clean, dry and free from manure .....	2	.....
<b>COWS</b>		
42 COWS have ..... been examined by Veterinarian ..... Date ..... 190 ..... Report was ..... Cows have ..... been tested by tuberculin, and all tuberculous cows removed .....	3	.....
43 Cows are ..... all in good flesh and condition at time of inspection .....	5	.....
44 Cows are ..... all free from clinging manure and dirt. (No. dirty .....)	2	.....
45 LONG HAIRS are ..... kept short on belly, flanks, udder and tail .....	4	.....
46 UDDER AND TEATS of cows are ..... thoroughly cleaned before milking .....	1	.....
47 ALL FEED is ..... of good quality and all grain and coarse fodders are ..... free from dirt and mould .....	2	.....
48 DISTILLERY waste or any substance in a state of fermentation or putrefaction is ..... fed .....	1	.....
49 WATER SUPPLY for cows is ..... unpolluted and plentiful .....	1	.....
50	2	.....
<b>MILKERS AND MILKING</b>		
51 ATTENDANTS are ..... in good physical condition .....	1	.....
52 Special Milking Suits are ..... used .....	1	.....
53 Clothing of milkers is ..... clean .....	1	.....
54 Hands of milkers are ..... washed clean before milking .....	1	.....
55 MILKING is ..... done with dry hands .....	2	.....
56 FORE MILK or first few streams from each teat is ..... discarded .....	2	.....
57 Milk is strained at ..... and ..... in clean atmosphere .....	1	.....
58 Milk strainer is ..... clean .....	1	.....
59 MILK is ..... cooled to below 50° F. within two hours after milking and kept below 50° F. until delivered to the creamery .....	2	.....
60 Milk from cows within 15 days before or 5 days after parturition is ..... discarded .....	1	.....
<b>UTENSILS</b>		
61 MILK PAILS have ..... all seams soldered flush .....	1	.....
62 Milk pails are ..... of the small mouthed design, top opening not exceeding 8 inches in diameter. Diameter .....	2	.....
63 Milk pails are ..... rinsed with cold water immediately after using and washed clean with hot water and washing solution .....	2	.....
64 Drying racks are ..... provided to expose milk pails to the sun .....	1	.....
<b>MILK HOUSE</b>		
65 MILK HOUSE is ..... located on elevated ground with no hog-pen, manure pile or privy within 100 feet .....	1	.....
66 Milk house has ..... direct communication with ..... building .....	1	.....
67 Milk house has ..... sufficient light and ventilation .....	1	.....
68 Floor is ..... properly graded and water-tight .....	1	.....
69 Milk house is ..... free from dirt, rubbish and all material not used in the handling and storage of milk .....	1	.....
70 Milk house has ..... running or still supply of pure clean water .....	1	.....
71 Ice is ..... used for cooling milk and is cut from .....	1	.....
<b>WATER</b>		
72 WATER SUPPLY for utensils is from a ..... located ..... feet deep and apparently is ..... pure, wholesome and uncontaminated .....	5	.....
73 Is ..... protected against flood or surface drainage .....	2	.....
74 There is ..... privy or cesspool within 250 feet (..... feet) of source of water supply .....	2	.....
75 There is ..... stable, barn-yard, or pile of manure or other source of contamination within 200 feet (..... feet) of source of water supply .....	1	.....
	100	.....

1587, '07, 50,000 (P)

Inspector of Foods

Name .....  
 Address .....  
 Name .....  
 Address .....  
 Name .....  
 Address .....  
 Name .....  
 Address .....

## SHIPMENTS TO CUSTOMERS

1874 .07, 5,000 (P)

Car left for loading is ..... delivered cold. Cans are ..... wired or sealed before shipping

Cream is made by hand-skimming, separating ..... living quarters are ..... located in Creamery

Butter, Cheese, Condensed Milk, Casein or Milk Sugar are ..... made on the premises

Average Butter Fat test for dairies at present ..... Milk received daily ..... Lbs., Qrs., Cans

Milk train leaves daily at ..... A. P. M. Arrives at ..... N. Y. Milk Platform

Method of Pasteurizing ..... Machine used

Manager ..... is ..... licensed. Number of help .....  
 All persons engaged in handling milk are ..... free from any infectious disease. Number of patrons .....  
 Operator ..... Address .....  
 Owner ..... Address .....  
 On ..... R. R. Branch ..... Miles to N. Y.

File ..... Inspection No. .... Time ..... A. P. M. Date ..... 190 .....

Location ..... P. O. Address .....  
 County ..... State .....  
 On ..... R. R. Branch ..... Miles to N. Y.

## DIVISION OF INSPECTIONS

## CREAMERY CARD

DEPARTMENT OF HEALTH  
CITY OF NEW YORK

175 F-1907

Perfect Score 100  
Score Allowed .....

Exhibit 7—Continued

	PERFECT SCORE	ALLOWED
<b>CREAMERY</b> is ..... located on dry and elevated ground .....	1	.....
Is ..... at least 100 feet away from any hog-pen, privy-vault, factory, manure loading platform or anything else objectionable .....	2	.....
Premises surrounding creamery are ..... clean .....	2	.....
<b>RECEIVING ROOM</b> is ..... partitioned off from main milk room .....	1	.....
Air is ..... free from dust, dirt or objectionable odors .....	2	.....
Weigh vats and storage tanks are ..... covered .....	2	.....
<b>MILK HANDLING ROOM</b> is ..... used exclusively for handling milk .....	1	.....
Is ..... separate from where cans are washed .....	1	.....
Is ..... separate from where engine or boiler is located .....	1	.....
Is ..... well lighted by ..... windows .....	2	.....
Has ..... good ventilation .....	2	.....
All odors and steam from washing apparatus are ..... carried off .....	1	.....
<b>WALLS AND CEILING</b> are ..... sheathed and dust tight .....	2	.....
Are ..... painted with some light colored paint .....	1	.....
All ledges are ..... clean and free from dust and dirt .....	2	.....
<b>FLOORS</b> are ..... free from dirt, rubbish or pools of drainage .....	2	.....
Are ..... made of concrete, stone or some non-absorbent material .....	4	.....
Are ..... water-tight .....	2	.....
Are ..... so graded that all drainage is discharged at one or more points .....	2	.....
Strainers in floor are ..... at least 12 inches in diameter .....	1	.....
<b>SPACE BENEATH CREAMERY</b> is ..... dry .....	2	.....
Is ..... free from waste or rubbish .....	1	.....
<b>DRAINS</b> are ..... of earthenware or iron .....	2	.....
Are ..... water-tight .....	2	.....
Are ..... continuous from the floor level to point of disposal .....	1	.....
Are ..... protected against freezing .....	1	.....
<b>DRAINAGE</b> is ..... satisfactorily disposed of .....	5	.....
Discharged into a stream .....	.....	.....
Discharged into a covered cesspool and pipes properly trapped .....	.....	.....
Land disposal at least 500 feet away from creamery .....	.....	.....
<b>MILK PUMPS AND PIPES</b> for milk, can ..... be readily taken apart .....	1	.....
Are ..... thoroughly cleaned daily .....	2	.....
All steam and water pipes are ..... painted and clean .....	1	.....
<b>STORAGE TANKS OR MIXING VATS</b> are ..... in good repair .....	1	.....
All tin joints are ..... soldered flush .....	2	.....
Are ..... thoroughly cleaned daily .....	2	.....
<b>MILK CANS</b> are ..... washed with hot water and washing solution .....	2	.....
Are ..... rinsed out with clean water .....	1	.....
Are ..... exposed to live steam for at least two minutes .....	2	.....
<b>ALL MILK</b> is ..... protected from dust and dirt while in pools .....	1	.....
Is ..... protected while in mixing vats or over aerators .....	2	.....
Is ..... received at a temperature not above 60° F. ....	2	.....
Is ..... kept below 50° while held or handled on premises .....	2	.....
<b>COOLING TANKS</b> are ..... water-tight .....	1	.....
Are ..... made of some non-absorbent material .....	1	.....
Are ..... supplied daily with clean water or filled with clean ice .....	1	.....
<b>WATER SUPPLY</b> is ample for all the needs of the creamery .....	5	.....
Water supply is ..... apparently free from all contamination and is from .....	10	.....
<b>ICE POND</b> is ..... polluted by privy or creamery waste .....	2	.....
<b>STORAGE TANK</b> for water is ..... cleaned regularly .....	1	.....
Is ..... covered or protected against dirt .....	1	.....
<b>ATTENDANTS</b> are ..... cleanly in their habits .....	2	.....
Garments worn by such employees are ..... clean .....	2	.....
<b>PRIVY</b> , water closet, earth closet, tight vault is ..... satisfactorily located .....	2	.....
Is ..... in a cleanly condition .....	1	.....
<b>SPITTING OR SMOKING</b> in any part of the building is ..... allowed .....	2	.....
Remarks .....	.....	.....
	100	.....

Inspector of Foods

# Department of Health      Milk Store Score Card      City of New York

Address \_\_\_\_\_ Borough of \_\_\_\_\_ Permit No. \_\_\_\_\_ Granted \_\_\_\_\_ 190\_\_\_\_

Name	Business	DATES OF INSPECTIONS	PERFECT SCORE
1.	General Surroundings Are Clean, 10. Fairly Clean, 5. Dirty, 0		10
2.	Ventilation Is Good, 2. Fair, 1. Bad, 0		2
3.	Lighting Is Good, 2. Fair, 1. Bad, 0		2
4.	Walls and Ceiling Are Clean, 2. Dirty, 0		2
5.	Floors Are Clean, 2. Fairly Clean, 1. Dirty, 0		2
6.	ATTENDANTS Are Apparently Free from Contagious Disease		8
7.	Are Cleanly in Their Habits		4
8.	Wear Clean Clothing		3
9.	Wear Clean, White Suits		2
10.	STORE Is Selling Milk Exclusively, 15. Is Selling Milk, Dairy Products, and Goods in Sealed Packages, 10. Is Selling Milk and Bakery Products, 8. Is Selling Milk and Cooked Foods, or General Groceries, 6		15
11.	MILK AFTER ITS RECEIPT AND BEFORE SALE Is Kept in a Cleanly Manner		4
12.	At a Temperature Not Above 50° F., 5. Otherwise, 0		5
13.	MILK DURING SALE Is Kept in a Clean, Properly Drained Ice Box, Used Only for Milk, 15. Other Foods Kept in Ice Box, 8. Milk Kept in a Clean, Well Covered Ice Tub, 10		15
14.	UTENSILS Are Clean, 5. Dirty, 0		5
15.	Are Sterilized Before Use		2
16.	Seams Are Soldered Flush		1
Carried Forward			82

Name	Business	DATES OF INSPECTIONS	PERFECT SCORE
17.	Milk Kept at a Temperature of 45° F. or Below, 15. 45° to 50°, 10. 50° to 55°, 3. 55° or Above, 0		82
18.	A Lactometer Is Used in Testing the Milk		15
19.	A Thermometer Is Used in Testing the Milk		1
Total Score			2
Remarks:			100
Dealers Supplying Milk			
Inspector			

## BUREAU OF MUNICIPAL RESEARCH

### HISTORY

January 1st, 1906 Organized as "Bureau of City Betterment"

May 3d, 1907 Incorporated as "Bureau of Municipal Research"

### PURPOSES

To promote efficient and economical municipal government; to promote the adoption of scientific methods of accounting and of reporting the details of municipal business, with a view to facilitating the work of public officials; to secure constructive publicity in matters pertaining to municipal problems; to collect, to classify, to analyze, to correlate, to interpret and to publish facts as to the administration of municipal government.

### REPORTS, JANUARY, 1906, to AUGUST, 1907

*Some Phases of the Work of the Department of Street Cleaning*  
(in print)

#### *City Owned Houses*

Led to the appointment of a commission by the mayor to devise a method of abolishing and preventing the recurrence of unsanitary and illegal conditions found in tenements owned by the city.

#### *Salary Increases Not Provided for in Budget*

#### *Inefficiency of Inspection of Combustibles*

Led to the dismissal of superintendent.

#### *The City of New York, the Street Railroad Companies and a Million and a Half Dollars*

Led to the establishment of a special bureau in the city's law department to take up and press the claims of the city against street railroad companies for paving done at the public's expense between the companies' rails.

#### *How Manhattan is Governed*

Led to investigation by the commissioners of accounts, upon whose findings the City Club brought charges before Governor Hughes demanding the removal of Borough President Ahearn. Hearing set for September 10th.

#### *Analysis of the Salary Expenditure of the Department of Health of the City of New York for the Year 1906*

Led to the adoption of the principle by the board of aldermen and the board of estimate and apportionment that future budgets should clearly indicate for what specific purposes the money voted is to be expended.

#### *Making a Municipal Budget; Functional Accounts and Records for the Department of Health* (in print)

#### *A Department of Municipal Audit and Examination; Report on the Office of Commissioners of Accounts*

Re-organization effected by the commissioner, with the approval of the mayor.

MSH 05507

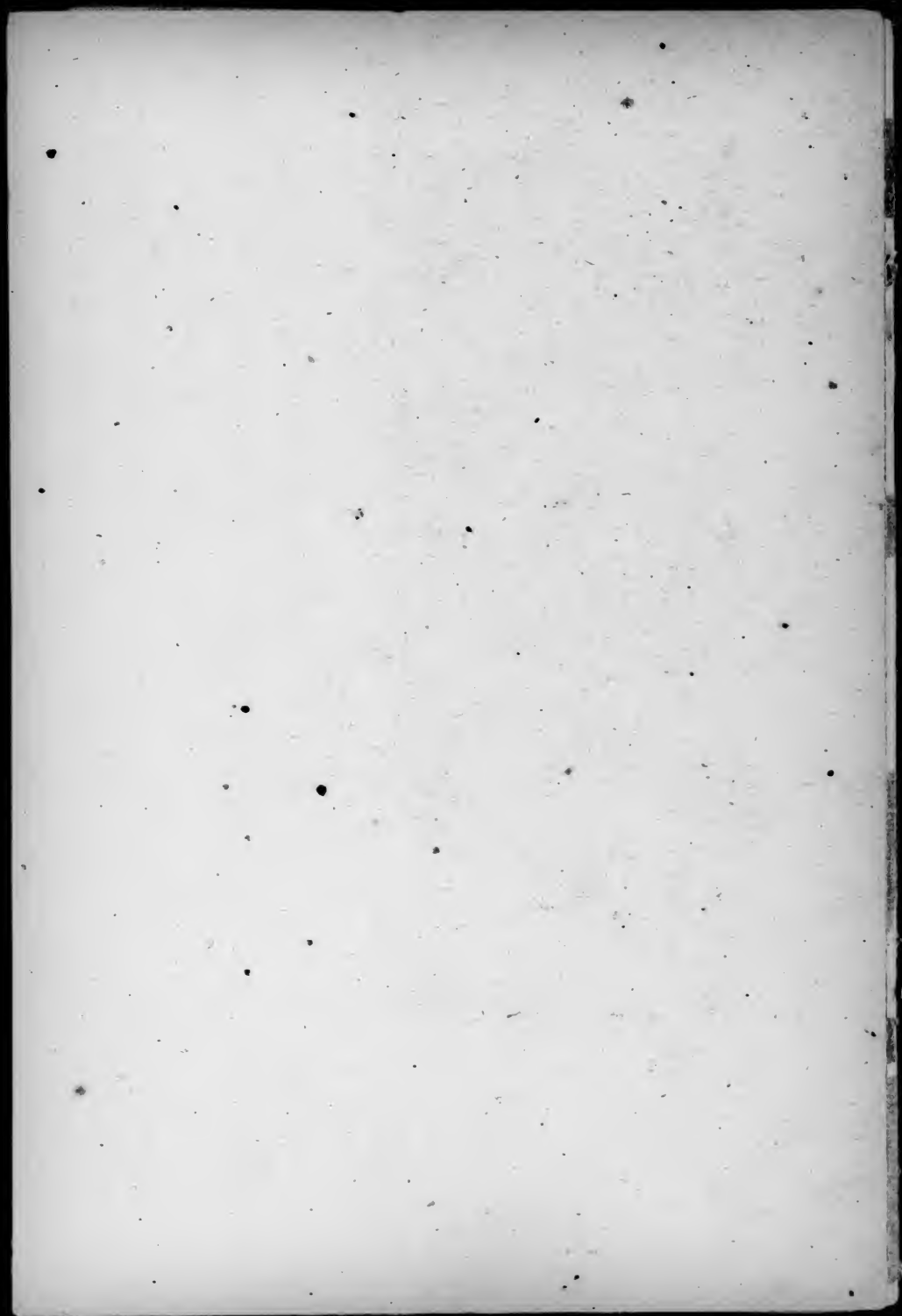
NEH

JAN 12 1908

COLUMBIA UNIVERSITY LIBRARIES



0044241941



**END OF  
TITLE**